S
388.1
T6EAGF
1997

UNITED STATES.
FEDERAL HIGHWAY
ADMINISTRATION
ENVIRONMENTAL
ASSESSMENT FOR
GREAT FALLS, 10TH
AVENUE SOUTH, F

STATE DOCUMENTS COLLECTION

SEP 2 1997

MONTANA STATE LIBRARY
1515 E. 6th AVE.
HELENA, MONTANA 59620

ENVIRONMENTAL ASSESSMENT
For
GREAT FALLS, 10TH AVENUE SOUTH
F 60-2 (25) 93
Control No. 1311
Cascade County, Montana

U.S. Department of Transportation
Federal Highway Administration
and
Montana Department of Transportation

DAVID EVANS AND ASSOCIATES, INC.
2828 S.W. CORBETT AVENUE PORTLAND, OREGON 97201 (503)223-6663

August 1997

PLEASE RETURN

MONTANA STATE LIBRARY
3 0864 0010 1819 4

ENVIRONMENTAL ASSESSMENT

for

F 60-2(25)93

GREAT FALLS, 10TH AVENUE SOUTH

Control No. 1311

in

CASCADE COUNTY, MONTANA

This document is prepared in conformance with Montana Environmental Policy Act (MEPA) requirements and contains the information required for an Environmental Assessment under the provisions of **ARM 18.2.237(2)** and **18.2.239**. It is also prepared in conformance with the National Environmental Policy Act (NEPA) requirements for an Environmental Assessment under **23 CFR 771.119.**

Submitted pursuant to **42 USC 4332(2)(C)** and
Sections 2-3-104, 75-1-201 M.C.A.
by the
U.S. Department of Transportation
Federal Highway Administration, Region 8
and the
Montana Department of Transportation

Submitted by: Joel M. M Date: 8/15/97
Montana Department of Transportation
Environmental Services

Reviewed and Approved for Distribution: Allen R. Radloff Date: 8/20/97
Federal Highway Administration
Region #8, Montana Division

The following persons may be contacted for additional information concerning this document:

Joel M. Marshik, P.E.
Manager - Environmental Services
Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena, Montana 59620-1001

Dale Paulson
Environmental Program Manager
Region #8, Montana Division
Federal Highway Administration
301 South Park, Drawer #10056
Helena, Montana 59626-0056

Digitized by the Internet Archive
in 2012 with funding from
Montana State Library

http://archive.org/details/environmental11094unit

TABLE OF CONTENTS

Page No.

EA DISTRIBUTION LIST vii

1. PROJECT DESCRIPTION 1
1.1 PROJECT LOCATION 1
1.2 PROPOSED ACTION 1
1.3 PURPOSE AND NEED FOR ACTION 2

2. ALTERNATIVES 5
2.1 NO ACTION ALTERNATIVE 5
2.2 RECONSTRUCTION ALTERNATIVE 5
2.3 ALTERNATIVES CONSIDERED BUT REJECTED FROM FURTHER REVIEW 6

3. AFFECTED ENVIRONMENT 7
3.1 SOILS AND GEOLOGY 7
3.1.1 Soils 7
3.1.2 Geology 7
3.2 HAZARDOUS MATERIALS 8
3.3 WATER RESOURCES 8
3.3.1 Surface Water 8
3.3.2 Floodplain 9
3.3.3 Groundwater 9
3.4 SENSITIVE, THREATENED, AND ENDANGERED SPECIES 9
3.5 WETLANDS 10
3.6 HISTORICAL AND CULTURAL RESOURCES 11
3.7 VISUAL RESOURCES 11
3.8 LAND USES AND LAND USE PLANS 11
3.8.1 Existing Land Uses 11
3.8.2 Land Use Plans 11
3.9 SOCIOECONOMICS 12
3.9.1 General Demographic Characteristics of Areas Near 10th Avenue South 12
3.9.2 Population 13
3.9.3 Population Characteristics 13
3.9.4 Housing 16
3.9.5 Employment 16
3.9.6 Public Services 16
3.10 ALTERNATIVE TRANSPORTATION MODES 18
3.10.1 Public Transit Service 18

3.10.2 Bicycle Facilities 18
3.10.3 Pedestrian Facilities 19
3.11 AIR QUALITY 19
3.12 NOISE 19

4. ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES 23
4.1 SOILS AND GEOLOGY 23
4.1.1 No Action Alternative 23
4.1.2 Reconstruction Alternative 23
4.2 HAZARDOUS MATERIALS 23
4.2.1 No Action Alternative 23
4.2.2 Reconstruction Alternative 24
Long-Term Mitigation Measures 24
4.3 WATER RESOURCES 24
4.3.1 No Action Alternative 24
4.3.2 Reconstruction Alternative 24
Surface Water 24
Floodplain 25
4.4 SENSITIVE, THREATENED, AND ENDANGERED SPECIES 25
4.4.1 No Action Alternative 25
4.4.2 Reconstruction Alternative 25
Long Term Mitigation Measures 26
4.5 WETLANDS 26
4.5.1 No Action Alternative 26
4.5.2 Reconstruction Alternative 26
4.6 HISTORICAL AND CULTURAL RESOURCES 26
4.6.1 No Action Alternative 26
4.6.2 Reconstruction Alternative 26
4.7 VISUAL RESOURCES 27
4.7.1 No Action Alternative 27
4.7.2 Reconstruction Alternative 27
4.8 LAND USES AND LAND USE PLANS 28
4.8.1 No Action Alternative 28
4.8.2 Reconstruction Alternative 28
Land Uses 28
Land Use Plans 28
Long-Term Mitigation Measures 29
4.9 SOCIOECONOMICS 29
4.9.1 No Action Alternative 29
4.9.2 Reconstruction Alternative 29
4.10 ALTERNATIVE TRANSPORTATION MODES (PUBLIC TRANSIT SERVICE, AND BICYCLE AND PEDESTRIAN FACILITIES) 30
4.10.1 No Action Alternative 30

4.10.2 Reconstruction Alternative 30
Long-Term Mitigation Measures 31
4.11 AIR QUALITY 32
4.11.1 No Action Alternative 32
4.11.2 Reconstruction Alternative 32
4.12 NOISE 32
4.12.1 No Action Alternative 32
4.12.2 Reconstruction Alternative 33
4.13 CONSTRUCTION IMPACTS 35
4.13.1 No Action 35
Grading 35
Hazardous Materials 35
Erosion and Sedimentation 36
Sensitive, Threatened, and Endangered Species 36
Wetlands 36
Historical and Cultural Resources 36
Visual Resources 36
Land Uses 36
Socioeconomics 36
Traffic 37
Alternative Transportation Modes (Public Transit Service, and Bicycle and Pedestrian Facilities) 37
Air Quality 37
Noise 37
4.13.2 Reconstruction Alternative 37
Grading 37
Hazardous Materials 38
Erosion and Sedimentation 39
Sensitive, Threatened, and Endangered Species 40
Wetlands 40
Historical and Cultural Resources 40
Visual Resources 40
Land Uses and Land Use Plans 41
Socioeconomics 41
Traffic 42
Alternative Transportation Modes (Public Transit Service, and Bicycle and Pedestrian Facilities) 43
Air Quality 43
Noise 44
Construction Mitigation Measures 44
4.14 SECTION 4(F) AND SECTION 6(F) RESOURCES 47
4.15 FARMLAND PROTECTION ACT 48
4.16 ENVIRONMENTAL JUSTICE AND *TITLE VI OF THE CIVIL RIGHTS ACT* 48

4.17 CUMULATIVE EFFECTS 50
4.18 SECONDARY EFFECTS 50
4.19 COMPLIANCE AND PERMIT REQUIRED 51

5. COMMENTS AND COORDINATION 53

6. LIST OF EA PREPARERS, AGENCY CONTACTS, AND AUTHORIZATIONS REQUIRED 55
6.1 LIST OF EA PREPARERS 55
6.2 LIST OF INDIVIDUALS AND AGENCIES CONTACTED AND THAT CONTRIBUTED INFORMATION TO THE EA 55
6.3 LIST OF AGENCIES WITH OVERLAPPING OR ADDITIONAL JURISDICTION, AND PERMITS AND AUTHORIZATIONS REQUIRED . . 56

7. REFERENCES CITED 57

APPENDICES 61
A. Summary of April 23, 1991 Location and Design Hearing
B. Agency Correspondence
C. Biological Assessment
D. Noise Assessments

LIST OF TABLES

Table — Page No.

1 Population Estimates--City of Great Falls, Great Falls Urban Transportation Study Area, and Cascade County 14
2 Low-Income Families and Minority Persons in the Vicinity of the 10th Avenue South Project Area 15
3 Dwelling Unit and Household Size Estimates--City of Great Falls, Great Falls Urban Transportation Study Area, and Cascade County 17
4 Employment Estimates--City of Great Falls, Great Falls Urban Transportation Study Area and Cascade County 17
5 Noise Monitoring Locations and Noise Levels Under Present (1988) Traffic Conditions 21
6 Noise Levels Under Present (1994) Traffic Conditions 21
7 Noise Levels Under Design Year (2012) Traffic Conditions 33
8 Noise Levels Under Present (1994) and Design Year (2018) Traffic Conditions 35
9 Estimated Amount of Excavated Soil With Each Remediation Alternative 39

LIST OF FIGURES

Figure — Following Page No.

1 Project Location Map 2
2 Typical Cross Sections 6
3 Contaminated Soil Locations 8
4 Photograph Index 12
5 Photographs of 10th Avenue South 12
6 Zoning Map 12
7 Great Falls Urban Transportation Study Area 14
8 Photographs of 9th Avenue South 40
9 Truck Routes During Construction 42

EA DISTRIBUTION LIST

The following agencies were sent a copy of this Environmental Assessment (EA). In addition, copies of the EA are available at the Montana Department of Transportation, Great Falls District Office at: 104 18th Avenue NE, Great Falls, Montana 59404, or by contacting Mr. Eugene Stettler, P.E., at (406) 727-4350.

Federal Agencies

U.S. Department of Transportation
Federal Highway Administration
Region 8, Montana Division
ATTN: Dale Paulson
301 South Park, Drawer 10056
Helena, MT 59626

U.S. Environmental Protection Agency
Montana Office
301 South Park, Drawer 10096
Helena, MT 59626

U.S. Fish and Wildlife Service
Ecological Services
Billings Suboffice
2900 4th Avenue North, Room 301
Billings, MT 59101

U.S. Army Corps of Engineers
Regulatory Office
1520 East 6th Avenue
Helena, MT 59620

State Agencies

Montana Department of Transportation
ATTN: Joel Marshik, P.E.
2701 Prospect Avenue
Helena, MT 59620-1001

Montana Department of Transportation
Great Falls District Office
ATTN: Eugene Stettler, P.E.
P.O. Box 1359
Great Falls, MT 59403-1359

Montana Dept. of Environmental Quality
Permitting and Compliance Division
1520 East Sixth Avenue
Helena, MT 59620

Montana State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202

Montana Environmental Quality Council
Office of the Director
P.O. Box 215
State Capitol
Helena, MT 59620

State Library
Collection Management Librarian
151 East Sixth Avenue
Helena, MT 59620-1800

Local Agencies

City Manager
City of Great Falls
P.O. Box 5021
Great Falls, MT 59403

Cascade County Commissioners
Cascade County Courthouse
Great Falls, MT 59401

Great Falls City-County Planning Board
ATTN: Director
Civic Center
P.O. Box 5021
Great Falls, MT 59403-5021

Local Agencies, Cont.

Cascade County Planning Board
ATTN: Director
415 Third Street NW
Great Falls, MT 59404

City of Great Falls Public Works
P.O. Box 5021
Great Falls, MT 59403

Great Falls Public Library
301 2nd Avenue North
Great Falls, MT 59401

Honorable Ardie Aiken
P.O. Box 5021
Great Falls, MT 59403

Other Interested Parties

Elementary School District 1 and High School District A
P.O. Box 2428
Great Falls, MT 59403

Great Falls Area Chamber of Commerce
P.O. Box 2127
Great Falls, MT 59403

1. PROJECT DESCRIPTION

1.1 PROJECT LOCATION

As shown on Figure 1, the proposed project corridor is located along a 2.6-kilometer (km) (1.6-mile [mi]) segment of 10th Avenue South in Great Falls, Cascade County, Montana. It extends from the east end of the Warden Bridge at approximately km 152.3 (Mile Post [MP] 94.7) to 20th Street South at approximately km 149.7 (MP 93.1).[1] This road is part of the state and federal highway system (State Route [SR] 200, United States (US) Highway Routes 87 (US 87) and 89 (US 89) and Federal Aid Program [FAP] Route 60) that provides east-west access across central Montana and connects with other major highway routes (e.g., SR 226 and Interstate 15 [I-15] in Great Falls, US Highways 2 [US 2] and 191 [US 191] in northern and central Montana, and Interstate 94 [I-94] in eastern Montana).

1.2 PROPOSED ACTION

The Montana Department of Transportation (MDT) is the proponent of the proposed action. The project is to be designed and constructed with state and federal funds. The proposed action is identified as federal project number F 60-2(25)93 and Montana Control No. 1311. There are no federal cooperating agencies for the proposed action.

The proposed action involves reconstruction and widening of the existing highway, converting it from a 25-meter (m) (81-foot [ft]) wide, four-lane facility with a raised median/turn bay, shoulders, curbs and gutters to a 30-m (98-ft) wide, six-lane facility with a 5-m (15-ft) wide median/turn bay. Progressing from the median outward, the reconstructed road would have a 3.6-m (12-ft) driving lane, two 3.5-m (11.5-ft) driving lanes, 0.6 m (2 ft) of curb and gutter, and a 1.4-m (4.5-ft) sidewalk in each direction.

Proposed improvements would include grading, drainage, surfacing, sidewalks, curb and gutter, signing, pavement markings, luminaire relocation, traffic signal upgrading, access improvements (driveways) and utility relocations. These improvements would be designed and constructed in accordance with the Montana Road Design Manual (MDT, 1994). The horizontal and vertical alignments would remain unchanged. The sharpest horizontal curve proposed is 2°00'. The steepest grade would be 5.4 percent (for 152± m [500± ft] between 18th and 20th streets). The

---

[1] From here on, all "Streets" referenced in this document are assumed to be located in the "South" part of Great Falls (south of Central Avenue) unless otherwise indicated.

design speed for this segment of 10th Avenue South is 56 kilometers per hour (kph) (35 miles per hour [mph]).

Driveways would be replaced in their existing locations. This segment of highway is not designated for "access control" or a limit in the number of access points (driveways and cross-street intersections) since it is in a well-established urban area and there are no feasible access control options (e.g., driveway consolidations or frontage roads).

All sidewalks, cross walks and pedestrian crossing signals would be designed in accordance with accessibility criteria in the Montana Road Design Manual; these criteria comply with the accessibility criteria in the Americans with Disabilities Act (ADA) (**P.L. 101-336**) and the "Americans with Disabilities Act Accessibility Guidelines" (ATBCB, 1991).

Utilities located along 10th Avenue South in the MDT right-of-way include both above-ground systems (telephone, street lighting and electrical) and below-ground systems (natural gas, cable television, water distribution, sanitary sewer, and storm drainage). However, because the highway would need to be excavated during reconstruction, certain utilities (water distribution, sanitary sewer, storm drainage, street lighting, and traffic signals) would need to be relocated by the responsible utility companies or City of Great Falls. For example, the water mains, currently located down the approximate center of 10th Avenue South, would be moved to either one side or both sides of the highway. This is to improve the ability to access these facilities for future operation and maintenance without excavating down the center of the highway. The sanitary sewer lines would remain in their existing locations but would be upgraded where they cross or parallel the highway. The storm drainage system would also be upgraded to improve drainage during heavy storms, including the addition of new mid-block inlets and, in some segments, a supplemental trunkline on the south side of 10th Avenue South. Where necessary, street lights, telephone poles and power poles would be relocated to be outside the new travel lanes. However, no major upgrades to these facilities are planned.

Construction of the proposed project would occur over two construction periods (mostly summers), and is planned for 1998 and 1999.

1.3 PURPOSE AND NEED FOR ACTION

Tenth Avenue South is an important link in the state and federal highway system through Montana. The route is heavily developed with commercial businesses that serve highway-related needs (e.g., service stations, restaurants, and hotels), as well as businesses that serve local and regional needs (e.g., shopping centers). It is one of the busiest urban arterials in Montana.

The primary objectives of the proposed project are to: (1) reconstruct and widen a segment of the road with a surface capable of handling projected traffic volumes and loads; and (2) increase

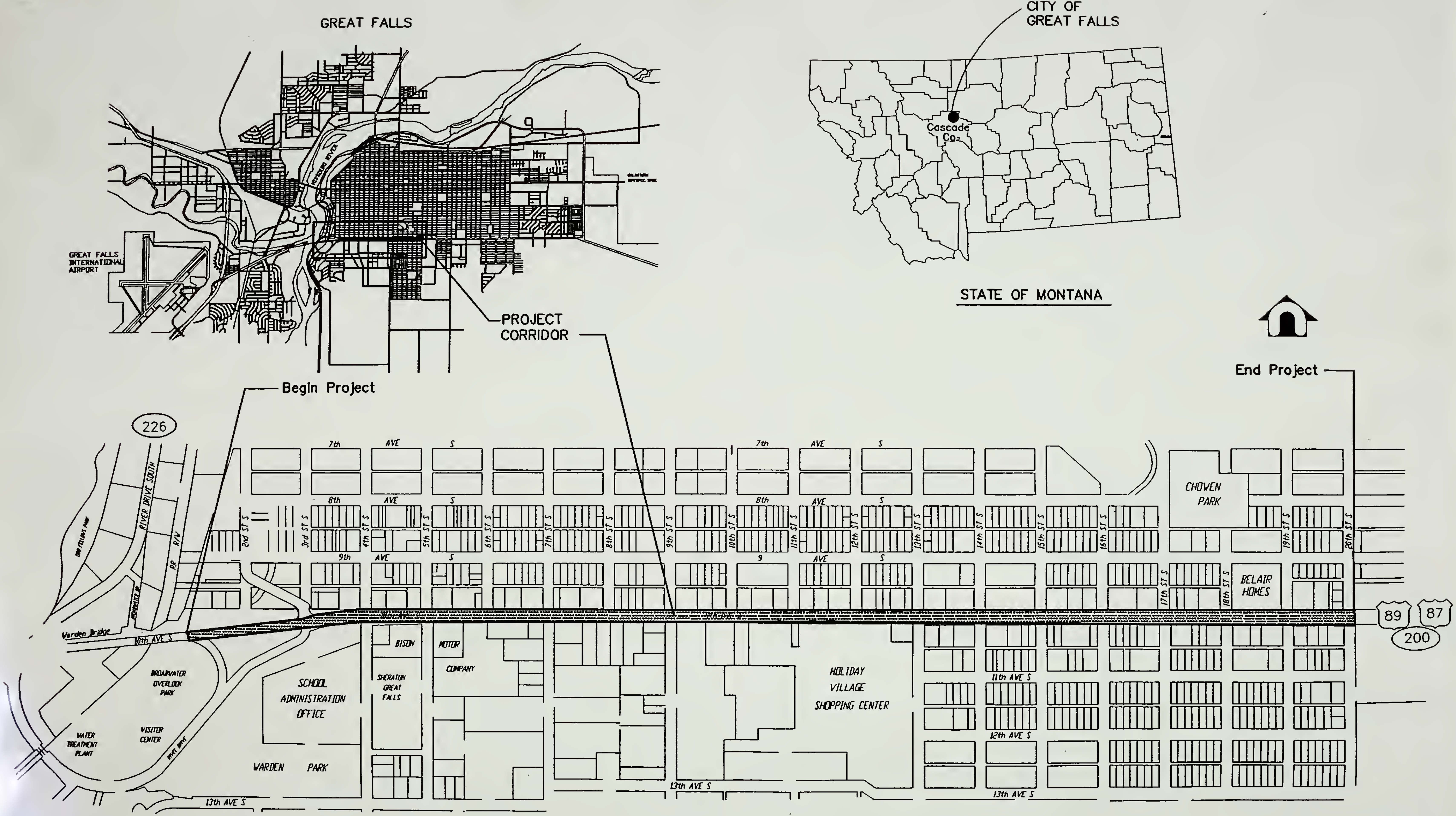


Figure 1

Project Location Map

Great Falls, 10th Avenue South Environmental Assessment

Montana Department of Transportation

F 60-2(25)93, CN 1311

the facility's capacity to maintain an acceptable level of service for the projected (future) traffic volumes. The need for the project is discussed below.

Tenth Avenue South was first paved in 1935 as part of a two-lane city street. The western-most 0.27-km (0.17-mi) segment of the project corridor from Warden Bridge to 2nd Street was widened to four lanes in 1983 when a two-lane structure was added to the original two-lane Warden Bridge. The 0.29-km (0.18-mi) section from 2nd Street to 5th Street was widened in 1952, with some median and curb-and-gutter added in 1964, and the 1.9-km (1.2-mi) from 5th Street to 20th Street was widened in 1956.

The surface for the entire project consists of 25-30 centimeters (cm) (10-12 inches [in]) of select borrow base course, 5 to 6 cm (2 to 2.5 in) of cushion course, and 6 cm (2.5 in) of plant mix surfacing. The existing surface and subgrade is deteriorated and in poor condition in many areas. Numerous maintenance overlays have been added through the years.

The need to increase the capacity of the highway is best shown by calculating the projected level of service (LOS) for the existing facility.[2] In 1987, the "Traffic Impact of the Small Intercontinental Ballistic Missile (ICBM) Program on Tenth Avenue South" calculated the LOS for the existing facility based on a projected average daily traffic (ADT) count of 40,130, with a design hourly volume (DHV) of 4,100, in the year 2012.

The LOS from 2nd Street to 38th Street was established using the urban arterial analysis techniques outlined in the "Highway Capacity Manual, Special Report 209" (Transportation Research Board, 1994). From the analysis, this portion of 10th Avenue South is operating at LOS "C". It is predicted to deteriorate to LOS "D" by the year 2000 and to LOS "E" by the year 2010 if the highway remains a four-lane facility. MDT concluded that a six-lane facility is needed to maintain an acceptable LOS of "C."

Reconstruction of 10th Avenue South would be consistent with the goals and policies of the "1990 to 2010 Great Falls Area Transportation Plan" (Great Falls City-County Planning Board [GFCCPB], 1990b) and its "1996 Addendum" (GFCCPB, 1996) which call for the reconstruction of 10th Avenue to a six-lane facility. Also, it would be consistent with City of Great Falls zoning and the "Great Falls Area Comprehensive Plan" (GFCCPB, 1981) land use designations for land along 10th Avenue South because it would support commercial uses along 10th Avenue South by improving the traffic flow along the highway.

Reconstructing the highway would have benefits for the utilities in the highway and, indirectly, would improve traffic flow that occurs during maintenance activities and operational problems

---

[2] The LOS scale of "A" to "F" is used for estimating the level of traffic congestion, with a LOS of "A" representing the best or free-flowing conditions, and a LOS of "F" representing the worst or extremely congested conditions--where both speed and volume can drop to zero.

with these utilities. For example, the City of Great Fall's water mains, which are currently located down the middle of the highway, would be moved by the City to either side of the highway during highway reconstruction. This would improve access to the water mains for maintenance and, thus, reduce future traffic disruption that would occur during maintenance activities. In addition, during highway reconstruction, the City would add mid-block stormdrain inlets and, in some segments, a supplemental trunkline along the south side of 10th Avenue South to provide additional storm drainage capacity. This would relieve localized flooding that occurs during heavy rainstorms, and also reduce traffic problems that occur during such flooding.

2. ALTERNATIVES

This EA evaluates, in detail, the "No Action" Alternative and one "action" alternative: the "Reconstruction Alternative." The Reconstruction Alternative is MDT's "preferred alternative" and is described in Section 2.2. Another action alternative: the "South Arterial Bypass Alternative" was considered by the Great Falls City-County Planning Board (GFCCPB) and MDT, but was rejected from further review as explained in Section 2.3.

2.1 NO ACTION ALTERNATIVE

The No Action Alternative implies that no activities beyond continued routine maintenance of the existing highway would take place into the foreseeable future. This alternative would not satisfy the project objectives identified in Section 1.3 since it would not provide a road surface capable of handling the projected traffic volumes and loads. Also, in the next few years, the LOS of the highway would deteriorate below an acceptable level.

2.2 RECONSTRUCTION ALTERNATIVE

Figure 2 illustrates the typical cross sections for the Reconstruction Alternative. As shown in the figure, Typical Section No. 1 would be a transitional segment of highway, having only four-lanes and a median. It would extend from the east end of the Warden Bridge (km 152.3 [MP 94.7]) to the River Drive off-on ramp/2nd Street intersection. East of this intersection, a third travel lane would be available in each direction for the length of the project, as shown by Typical Section Nos. 2 and 3 in Figure 2. The west-bound outside (third) travel lane would become a right-turn-only lane as it approaches 2nd Street. Therefore, it would not extend west of 2nd Street. The east-bound outside (third) travel lane would be created east of Second Street by the right-turn lane coming off the northbound River Drive off-ramp. A similar road configuration would occur at 20th Street where the six-lane configuration would terminate.

MDT is planning to place edge drains under the pavement to relieve the water pressure under the pavement. These drains would extend below the present subgrade, and would be wrapped in a permeable geotextile fabric.

A Traffic Control Plan has been developed for this alternative. The plan, which is described in Section 4.13.2, includes traffic control provisions for temporary signs, property access, lighting, and special detours.

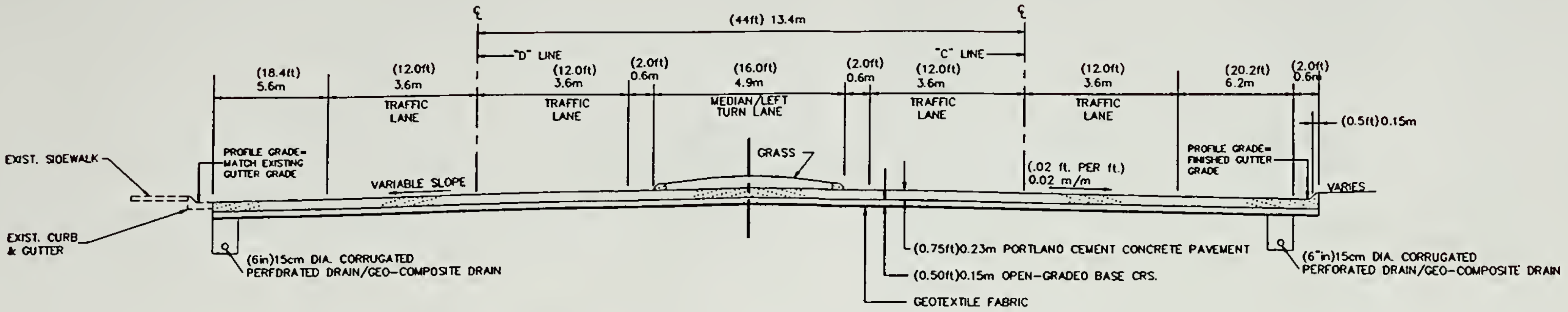
2.3 ALTERNATIVES CONSIDERED BUT REJECTED FROM FURTHER REVIEW

The only other alternative considered to resolve the problems on 10th Avenue South was the "South Arterial Alternative." This alternative (originally referred to as the "South Bypass") was identified as early as 1968 in the first Great Falls Transportation Plan as a facility that would relieve traffic congestion on 10th Avenue South, Warden Bridge and Fox Farm Road (GFCCPB, 1990a). It was proposed as a four-lane, limited access facility which would extend from the Airport Interchange on Gore Hill at I-15 on the west end to the intersection of 57th Street and 10th Avenue South (US 87/89) on the east end. In 1980, an "Environmental Impact Statement/4(f) Evaluation - Route Location Study" for the bypass was completed (HKM Associates, Inc., 1980).

In 1990, capacity analyses were conducted that demonstrated that the South Arterial would substantially reduce traffic on 10th Avenue South, and would allow 10th Avenue South to operate below capacity through 2010 (GFCCPB, 1990a). However, these analyses also concluded that widening 10th Avenue South to six lanes would also provide the needed additional capacity, and would provide more immediate benefit than the South Arterial since it would also address the need to reconstruct the deteriorating pavement on 10th Avenue South. The need for a South Arterial to relieve traffic congestion on 10th Avenue South is not needed by 2000, and could be postponed to beyond 2010 if 10th Avenue South is widened to six lanes.

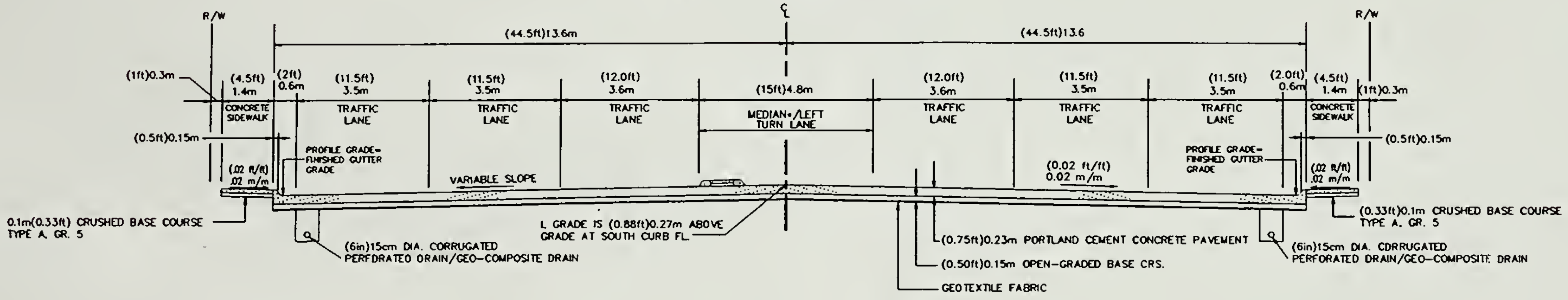
The South Arterial Alternative was considered by the GFCCPB and MDT but was rejected since it would not meet the project objectives to improve the roadway surface conditions on 10th Avenue South. However, the South Arterial is considered by MDT and GFCCPB as a probable element of the future transportation system for the Great Falls area; it will most likely be needed to divert pass-through traffic from 10th Avenue South. At this time, however, it is not considered necessary to meet the local, state, or federal needs of the transportation system through 2010; and does not preclude the need to resurface and widen 10th Avenue South.

TYPICAL SECTION NO. 1


(44ft) 13.4m
"D" LINE
"C" LINE
(18.4ft) 5.6m
(12.0ft) 3.6m TRAFFIC LANE
(12.0ft) 3.6m TRAFFIC LANE
(2.0ft) 0.6m
(16.0ft) 4.9m MEDIAN/LEFT TURN LANE
(2.0ft) 0.6m
(12.0ft) 3.6m TRAFFIC LANE
(12.0ft) 3.6m TRAFFIC LANE
(20.2ft) 6.2m
(2.0ft) 0.6m
(0.5ft)0.15m
EXIST. SIDEWALK
PROFILE GRADE= MATCH EXISTING GUTTER GRADE
VARIABLE SLOPE
GRASS
(.02 ft. PER ft.) 0.02 m/m
PROFILE GRADE= FINISHED GUTTER GRADE
VARIES
EXIST. CURB & GUTTER
(6in)15cm DIA. CORRUGATED PERFORATED DRAIN/GEO-COMPOSITE DRAIN
(0.75ft)0.23m PORTLAND CEMENT CONCRETE PAVEMENT
(0.50ft)0.15m OPEN-GRADED BASE CRS.
GEOTEXTILE FABRIC
(6"in)15cm DIA. CORRUGATED PERFORATED DRAIN/GEO-COMPOSITE DRAIN

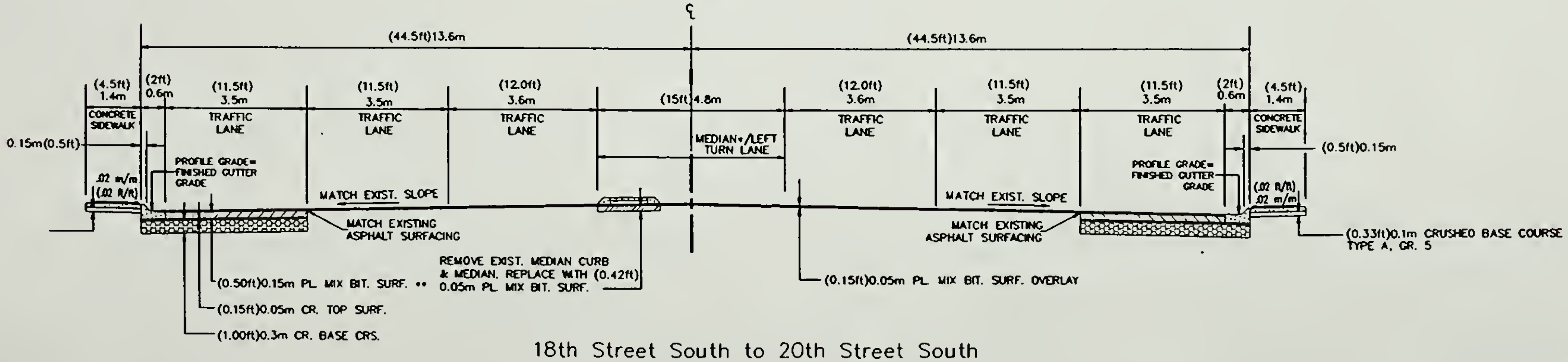
East end of Warden Bridge to River Drive Off–On Romp/2nd Street South

TYPICAL SECTION NO. 2


R/W
R/W
(44.5ft)13.6m
(44.5ft)13.6
(1ft)0.3m
(4.5ft) 1.4m CONCRETE SIDEWALK
(2ft) 0.6m
(11.5ft) 3.5m TRAFFIC LANE
(11.5ft) 3.5m TRAFFIC LANE
(12.0ft) 3.6m TRAFFIC LANE
(15ft)4.8m MEDIAN/LEFT TURN LANE
(12.0ft) 3.6m TRAFFIC LANE
(11.5ft) 3.5m TRAFFIC LANE
(11.5ft) 3.5m TRAFFIC LANE
(2.0ft) 0.6m
(4.5ft) 1.4m CONCRETE SIDEWALK
(1ft)0.3m
(0.5ft)0.15m
(0.5ft)0.15m
PROFILE GRADE= FINISHED GUTTER GRADE
(.02 ft/ft) .02 m/m
VARIABLE SLOPE
(0.02 ft/ft) 0.02 m/m
PROFILE GRADE= FINISHED GUTTER GRADE
(.02 ft/ft) .02 m/m
0.1m(0.33ft) CRUSHED BASE COURSE TYPE A. GR. 5
L GRADE IS (0.88ft)0.27m ABOVE GRADE AT SOUTH CURB FL.
(6in)15cm DIA. CORRUGATED PERFORATED DRAIN/GEO-COMPOSITE DRAIN
(0.75ft)0.23m PORTLAND CEMENT CONCRETE PAVEMENT
(0.50ft)0.15m OPEN-GRADED BASE CRS.
GEOTEXTILE FABRIC
(0.33ft)0.1m CRUSHED BASE COURSE TYPE A. GR. 5
(6in)15cm DIA. CORRUGATED PERFORATED DRAIN/GEO-COMPOSITE DRAIN

River Drive Off–On Romp / 2nd Street South to 18th Street South

TYPICAL SECTION NO. 3


(44.5ft)13.6m
(44.5ft)13.6m
(4.5ft) 1.4m CONCRETE SIDEWALK
(2ft) 0.6m
(11.5ft) 3.5m TRAFFIC LANE
(11.5ft) 3.5m TRAFFIC LANE
(12.0ft) 3.6m TRAFFIC LANE
(15ft)4.8m MEDIAN/LEFT TURN LANE
(12.0ft) 3.6m TRAFFIC LANE
(11.5ft) 3.5m TRAFFIC LANE
(11.5ft) 3.5m TRAFFIC LANE
(2ft) 0.6m
(4.5ft) 1.4m CONCRETE SIDEWALK
0.15m(0.5ft)
(0.5ft)0.15m
.02 m/m (.02 ft/ft)
PROFILE GRADE= FINISHED GUTTER GRADE
MATCH EXIST. SLOPE
MATCH EXISTING ASPHALT SURFACING
MATCH EXIST. SLOPE
MATCH EXISTING ASPHALT SURFACING
PROFILE GRADE= FINISHED GUTTER GRADE
(.02 ft/ft) .02 m/m
(0.33ft)0.1m CRUSHED BASE COURSE TYPE A. GR. 5
REMOVE EXIST. MEDIAN CURB & MEDIAN. REPLACE WITH (0.42ft) 0.05m PL MIX BIT. SURF.
(0.50ft)0.15m PL. MIX BIT. SURF. **
(0.15ft)0.05m CR. TOP SURF.
(1.00ft)0.3m CR. BASE CRS.
(0.15ft)0.05m PL. MIX BIT. SURF. OVERLAY

18th Street South to 20th Street South

FIGURE 2
TYPICAL SECTIONS

Great Falls, 10th Avenue South
Environmental Assessment
Montono Department of Tronsportotion

3. AFFECTED ENVIRONMENT

This section of the EA describes the existing environment which could be affected by the proposed action, including both natural and human environments. The primary affected environment, the area that would be most directly affected by the proposed action, includes 10th Avenue South between the Warden Bridge on the west and 20th Street on the east.

3.1 SOILS AND GEOLOGY

3.1.1 Soils

Based on soil borings made by a MDT consultant in 1995, tannish brown, fine- to medium-grained sand underlies the majority of the project area from near surface to a depth of approximately 2.7 to 3.0 m (9 to 10 ft). This upper interval of sediment ranges to silt in some locations, with some interbedded clay layers.

Dark grey, dense "gumbo" clay beneath the upper silt and sand layer was generally encountered at depths of 1.8 to 3.0 m (6 to 10 ft) throughout the majority of the project area. This clay was consolidated at some soil boring locations and limited the depth of investigation. The clay likely limits the vertical migration of groundwater (and probably dissolved contaminants) throughout the area.

The consultant's probes encountered consolidated siltstone near-surface in the vicinity of the Firestone (at approximately km 150.7 [MP 93.7]). Siltstone was also found at a depth of approximately 2.7 m (9 ft) near the west end of the project area close to Pro-Lube (at approximately km 151.9 [MP 94.4]). The "gumbo" clay was not present at this location. Consolidated sandstone was found at depth (approximately 2.7 m [9 ft]) near the east end of the project corridor.

3.1.2 Geology

The surficial geology of the project area is predominantly glacial lakebed clay. This clay is typically highly plastic and potentially expansive (gumbo clay). Near ground surface, the clay is often overlain by fluvial or windblown sands along with some recent clay layers. Shallow groundwater perched above the gumbo (lakebed) clay stratum is common in the project area. Shale and sandstone of the Cretaceous Kootenai Formation underlie the area at depth (Maxim, 1995).

3.2 HAZARDOUS MATERIALS

In 1995, MDT had a subsurface investigation prepared for MDT right-of-way along the study corridor (Maxim, 1995). Numerous automotive repair and service stations are located along 10th Avenue South within the project area. Many locations along the route have also been the site of past service stations or other businesses which may have stored, dispensed or handled materials with the potential to contaminate soil and/or groundwater. The histories of 30 facilities were researched prior to the subsurface investigation. Geoprobe soil borings were completed at locations adjacent to the majority of these facilities during the subsurface investigation.

Several of the facilities identified had documented releases of petroleum hydrocarbons. Although remediation has been completed or is presently on-going at the majority of these facilities, the potential off-site impacts to soil and groundwater underlying 10th Avenue South have not been fully assessed at all of these sites. See Section 3.3.3 for a discussion of the existing groundwater characteristics in the study area.

Field screening results indicate that soil contamination is present beneath MDT right-of-way adjacent to 15 separate businesses within the 10th Avenue South project area. The locations of these impacted sites are shown on Figure 3.

Laboratory analysis of soil samples indicate that contaminant concentrations exceed DEQ soil clean-up guidelines at four of the 15 sites.[3] As shown on Figure 3, these sites include: Pardis Chiropractic Clinic (at km 151.4 [MP 94.0]), Montgomery Wards (at km 151.2 [MP 94.0]), Fast Car Wash (at km 150.9 [MP 93.8]), Holiday Village (at km 150.9 [MP 93.8]), and Taco Treat (at km 150.2 [MP 93.3]). However, the level of investigation completed to date may not adequately identify the location and define the extent of contaminated soil present in the project area. Additional contaminated soil could be encountered during future excavation activities.

3.3 WATER RESOURCES

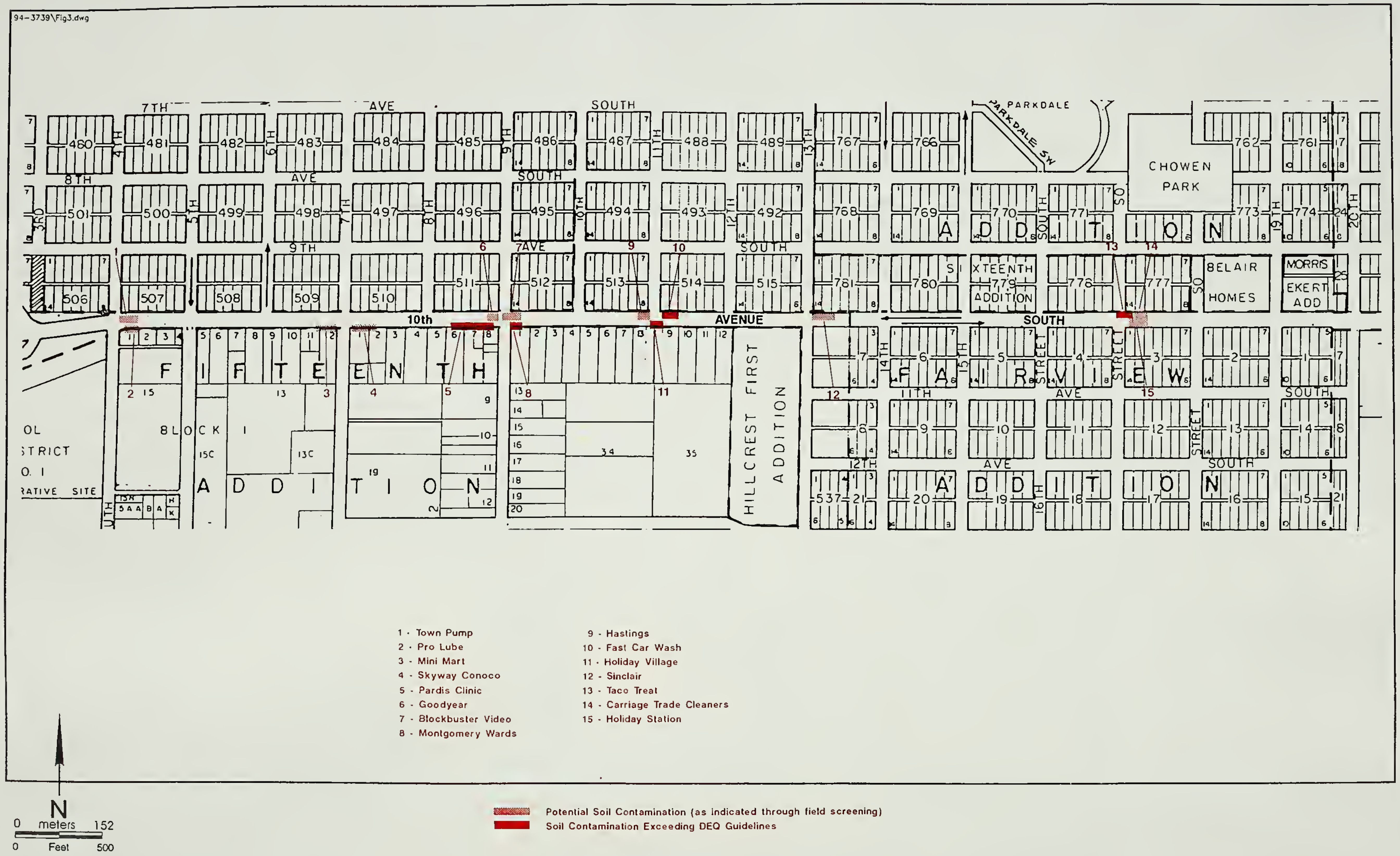
3.3.1 Surface Water

Stormwater runoff on 10th Avenue South drains via the local storm drain system into the Missouri River. Most of the highway (between 2nd Street and 14th Street) drains westward via storm drains in the highway. These storm drains connect to storm drains in the cross streets that drain northward to the storm drain in 9th Avenue South that flows westward to the Missouri

---

[3] The DEQ soil clean-up standard for BTEX (total concentration of benzene, toluene, ethylbenzene and xylenes) is 10 parts per million (ppm), and for GRO (gasoline range organics) or DRO (diesel range organics) it is 100 ppm.

Note:
No contamination
was found in study area
west of 4th Street South



1 - Town Pump
2 - Pro Lube
3 - Mini Mart
4 - Skyway Conoco
5 - Pardis Clinic
6 - Goodyear
7 - Blockbuster Video
8 - Montgomery Wards
9 - Hastings
10 - Fast Car Wash
11 - Holiday Village
12 - Sinclair
13 - Taco Treat
14 - Carriage Trade Cleaners
15 - Holiday Station

▨ Potential Soil Contamination (as indicated through field screening)
🟥 Soil Contamination Exceeding DEQ Guidelines

MAXIM 94-3739

FIGURE 3
CONTAMINATED SOIL LOCATIONS
Great Falls, 10th Avenue South
Environmental Assessment
Montana Department of Transportation
F 60-2(25)93, CN 1311

River. Between 15th Street and 20th Street, the highway drains to a storm drain in 18th Street which flows northward, then connects to the main in 1st Avenue, which connects to the main in 15th Street. This storm drain flows northward to discharge into the Missouri River.

The water quality of runoff from the highway is impacted by vehicle-related contaminants, such as motor oil, grease and tire rubber. In addition, the runoff is impacted by herbicides and pesticides used in the landscaped areas along the highway.

3.3.2 Floodplain

The elevation of the 100-year floodplain for the confluence of the Sun and Missouri rivers is at 1,012.8 m (3,322.8 ft) USGS datum (Pierce, pers. comm., 1996). The project segment of 10th Avenue South is above the 100-year floodplain, with an elevation ranging from 1,018 m (3,339.9 ft) at 2nd Street to 1,049 m (3,441.6 ft) at 20th Street.

Localized flooding of 10th Avenue South does occur at its intersections with both 7th Street and 9th Street. This flooding occurs every two to three years during a heavy rainstorm and is caused by a combination of factors, including the high volume of runoff from the Holiday Village Mall and the capacity limitations of the storm drainage system in this area (Pierce, pers. comm., 1996).

3.3.3 Groundwater

Depth to groundwater encountered in soil borings ranged from approximately 1.8 to 2.7 m (6 to 8 ft) below ground surface (Maxim, 1995). Quantities of groundwater encountered in the borings were insufficient to collect samples for field or laboratory analysis. The random occurrence and relatively small quantity of groundwater encountered during the investigation suggest that groundwater is locally perched on clay layers within the upper soil interval or on the upper surface of the gumbo clay layer underlying the majority of the project corridor.

3.4 SENSITIVE, THREATENED, AND ENDANGERED SPECIES

Correspondence with the Montana Natural Heritage Program (MNHP) identified sensitive plant communities in the vicinity of Great Falls, but none were known to occur within the project area (MNHP, 1995)--see Appendix B for a copy of the correspondence.

The US Fish and Wildlife Service (USFWS) and MDT identified three endangered species that may occur in the general study area: bald eagle (*Haliaeetus leucocephalus*), peregrine falcon (*Falco peregrinus*), and black-footed ferret (*Mustela nigripes*) (USFWS, 1991 and MDT, 1992a)--see Appendix B for correspondence from USFWS. Additionally, the study area is in the general range of the threatened piping plover (*Charadrius melodus*) and interior least tern (*Sterna antillarum*) (USFWS, 1991 and MDT, 1992a).

As required by Section 7 of the Endangered Species Act (**16 USC 1536**), a Biological Assessment (BA) was prepared by MDT in 1992 to evaluate the project's potential effects on threatened and endangered species. (A copy of the BA is included in Appendix C.) The BA determined that there are no bald eagle nest territories known to occur within several miles of the proposed project. The closest bald eagle territories occur along the Missouri River near Cascade (several miles southwest of Great Falls). The study area contains no suitable bald eagle nesting habitat, and no eagles were observed during the field survey (MDT, 1992a).

Peregrine falcons may occur in the project area as spring and fall migrants, although such occurrences are extremely rare. No nest or introduction sites are known to occur, or are proposed in, the vicinity of the project (MDT, 1992a).

Neither the piping plover nor the interior least tern are known to nest in the Great Falls area, and no potential nesting habitat occurs in the vicinity of the project (MDT, 1992a).

The black-footed ferret occurs in prairie dog towns. No such dog towns are known to occur in Great Falls, nor were any observed in the project area (MDT, 1992a).

3.5 WETLANDS

A wetlands investigation of the project area, prepared by MDT in 1992, found wetlands, covering a total of less than 0.04 hectare (ha) (0.10 acre [ac]) within two narrow ditches located along the south side of 10th Avenue South, on either side of the River Drive on/off ramp at Second Street (MDT, 1992b and 1992c). The wetland west of the on/off ramp measures approximately 0.023 ha (0.057 ac), and the wetland east of the on/off ramp measures approximately 0.011 ha (0.028 ac). These wetlands receive runoff from the adjacent landscaped area's sprinkler system. Silts have washed into the ditches and blocked the drainage; and aquatic vegetation has been established in the standing water.

The investigation identified the following plant species in the ditches: cattails (*Typha latifolia*), rushes, (*Juncus* sp.), sedges (*Carex* sp.), small cottonwoods (*Populus trichocarpa*), curly dock (*Rumex crispus*), and Kentucky bluegrass (*Poa pratensis*). The wetland areas have a functional class of "4", having low wildlife habitat value due to high traffic volumes on the adjacent roadways and close proximity to a populated area (MDT, 1992c). A copy of the wetlands investigation is on file at MDT.

3.6 HISTORICAL AND CULTURAL RESOURCES

In 1989, a cultural resources study (GCM Services, Inc., 1989) was prepared for the project corridor in accordance with Section 106 of the National Historic Preservation Act (**16 USC 470f**). No prehistoric sites were found within the project area. Three historic residences (over 45 years old) are located along 10th Avenue South. A supplemental cultural resources study for the project corridor was prepared in 1995 and identified an historic commercial building along 10th Avenue South (MDT, 1995a). A copy of each cultural resources study is on file at MDT.

3.7 VISUAL RESOURCES

As shown in Figures 4 and 5, the study portion of 10th Avenue South is a mostly commercial street with numerous and varied business signs and building types, and limited landscaping.

3.8 LAND USES AND LAND USE PLANS

3.8.1 Existing Land Uses

Land uses along 10th Avenue South between the Missouri River and 20th Street include mostly commercial uses (see Figure 5). In addition, there are two single-family residences and one apartment complex, and a City of Great Falls public park (Warden Park).

3.8.2 Land Use Plans

The GFCCPB conducts land use planning for the City of Great Falls and surrounding unincorporated areas of Cascade County that are expected to be urbanized in the foreseeable future. In 1981, both the City and County adopted the "1981-2000 Great Falls Area Comprehensive Plan" for the development of the Great Falls planning area. This plan included goals and policies for population growth, the economy, the transportation system, community facilities, housing and capital improvements. In 1990, the GFCCPB updated the Transportation Plan element of the Comprehensive Plan. The resulting "1990 to 2010 Transportation Plan" and its 1996 Addendum recommended the reconstruction of 10th Avenue South from Warden Bridge to 20th Street to six lanes to meet the area's transportation needs through 2010 (GFCCPB, 1990b and 1996).

Zoning for the project area and vicinity is shown on Figure 6. As shown on the figure, 10th Avenue South is to remain a primarily commercial street. Part of the project area is within the

"Great Falls Central Place Revitilization Plan" planning area (see Figure 6a). This area is the focus of a plan to rehabilitate and, in some areas, redevelop, the central part of Great Falls to improve its livability and economic vitality.

3.9 SOCIOECONOMICS

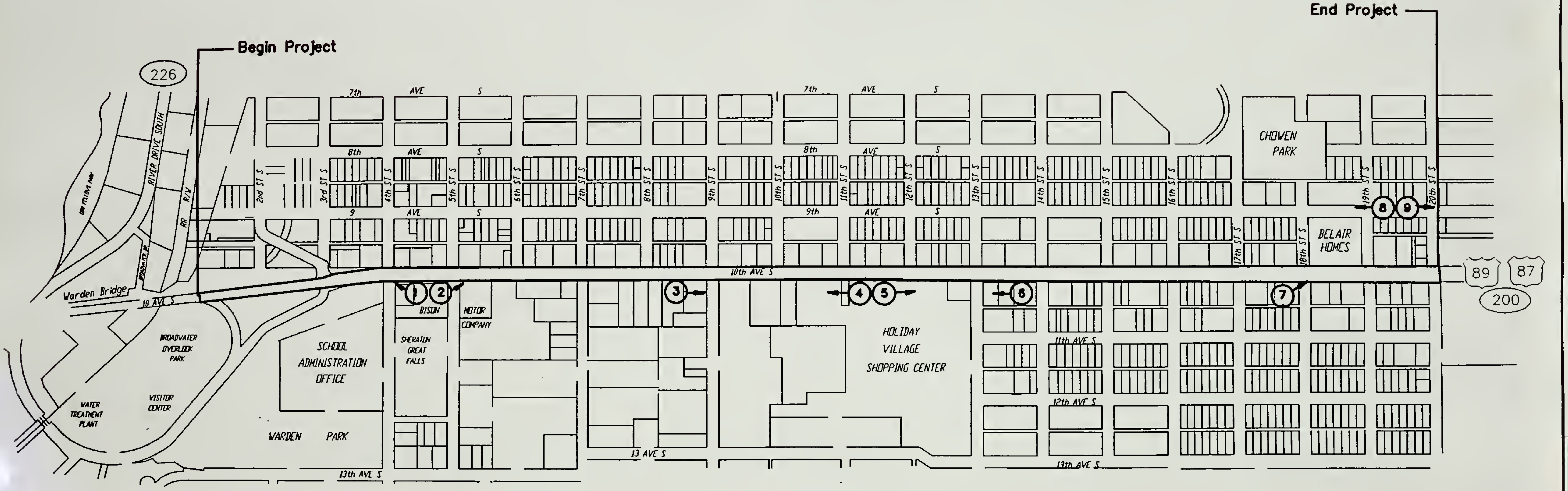
3.9.1 General Demographic Characteristics of Areas Near 10th Avenue South

General demographic information for the project area is available for the "Great Falls Urban Transportation Study Area," which includes incorporated City of Great Falls plus surrounding unincorporated areas of Cascade County that are expected to be urbanized in the future (see Figure 7). It is divided into eight "super zones" for the purpose of analyzing transportation patterns. The project corridor (10th Avenue South) forms the border between Super Zones 1 and 2 to the north and Super Zone 5 to the south.

Super Zone 1, which is bounded by the Missouri River on the north and west, by 10th Street on the east and by 10th Avenue South on the south, is the original town site. It is characterized by a mix of light industrial, commercial, governmental, and residential uses. Although in some parts of this zone, single-family residential uses have been converted into multiple-family uses, there is an effort to preserve and rehabilitate the single-family characteristics of the residential areas in this zone through the Great Falls Central Place Revitilization Plan and other funding mechanisms. Rehabilitation of the original downtown commercial area is a part of this plan. Thus, the population in this zone is expected to remain relatively stable, with perhaps only a small net out-migration (Mountain West Research-North, Inc., 1985).

Super Zone 2, which is bounded by the Missouri River on the north, 10th Street on the west, 38th Street on the east, and 10th Avenue South on the south, is the central residential zone and contains the largest residential population of any super zone. This area represents an area of stable and traditional neighborhoods. Because it is almost fully developed, the rate of population increase for this area will be relatively small, and will most likely begin to decline at the turn of the century. Commercial areas within this zone are not expected to grow appreciably with the exception of the area along the north side of 10th Avenue South, which will continue to be grow at a moderate pace as commercial property becomes available (Mountain West Research-North, Inc., 1985).

Super Zone 5, which is bounded by 10th Avenue South on the north, the Missouri River on the west, and the Urban Transportation Study Area Boundary on the south and east, includes a mix of residential, commercial, community health and educational uses (including the University of Great Falls and the Montana State University-College of Technology, Great Falls). Due to the relatively large employment and student generators in this area, it is expected that residential



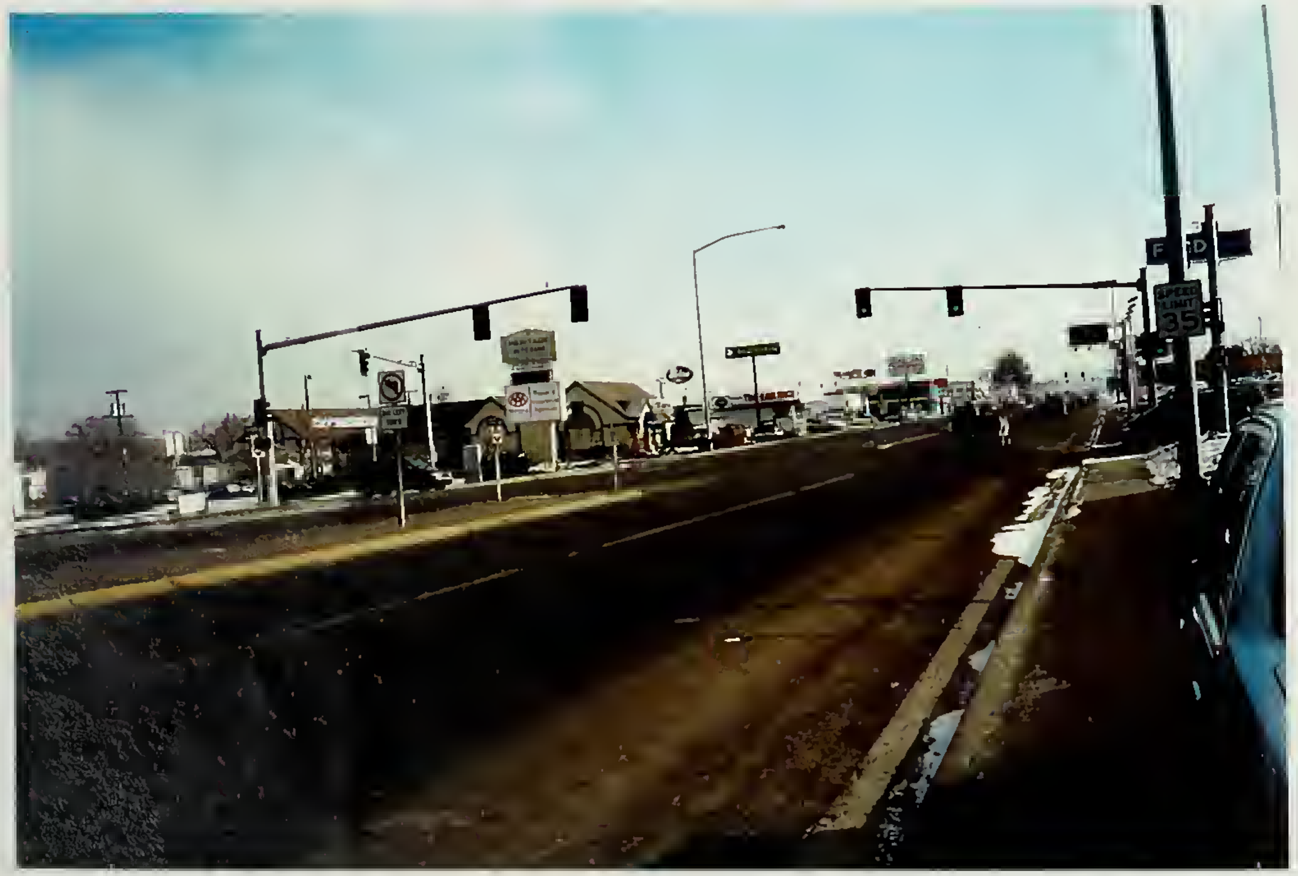
Note: Photographs 1 to 7 are shown on figure 7.
Photographs 8 to 9 are shown on figure 10.

Figure 4
Photograph Index

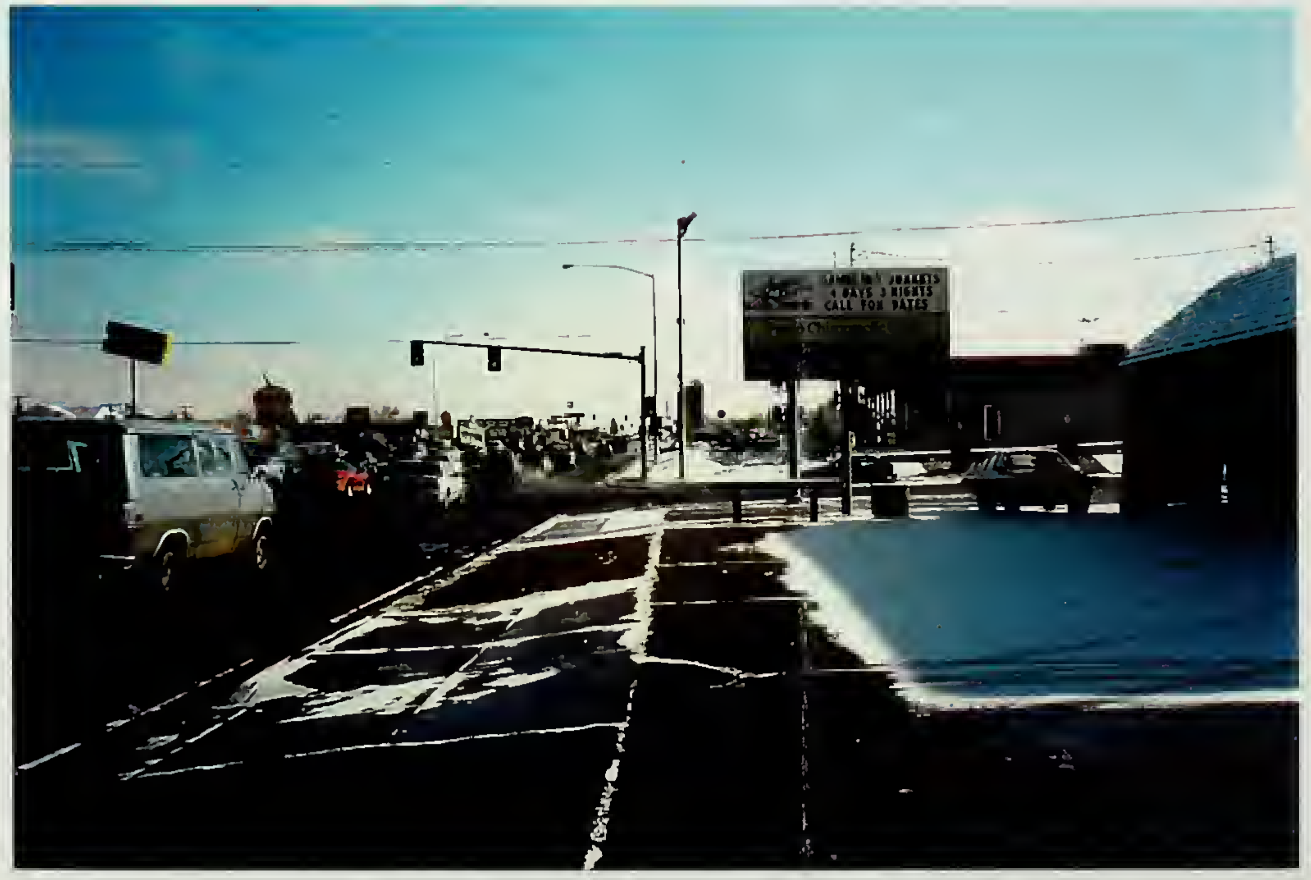
Great Falls, 10th Avenue South
Environmental Assessment

Montana Department of Transportation
F 60-2(25)93, CN 1311

Viewpoint 1: Looking northeast from between 4th and 5th streets.



Viewpoint 2: Looking east from between 4th and 5th streets.

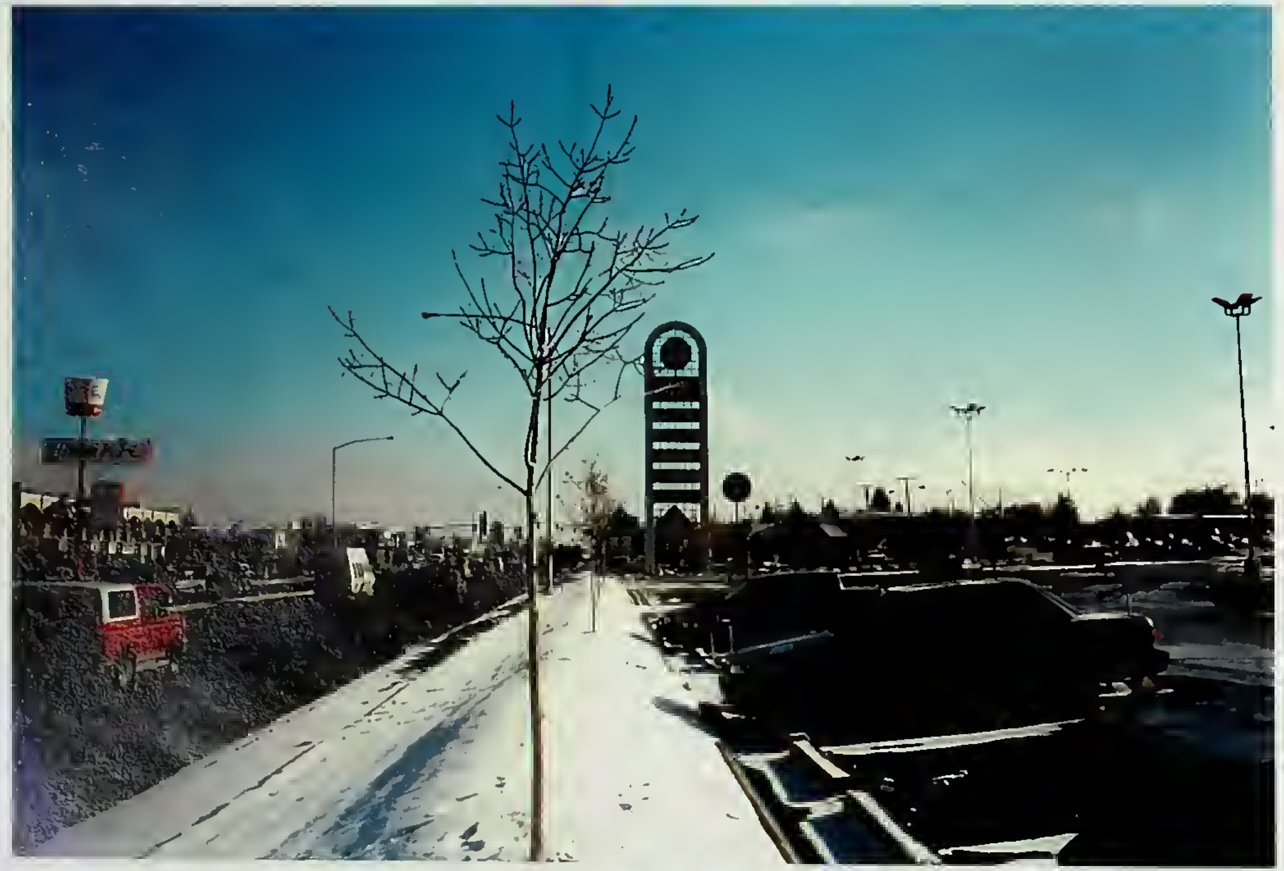


Viewpoint 3. Looking east from between 8th and 9th streets.

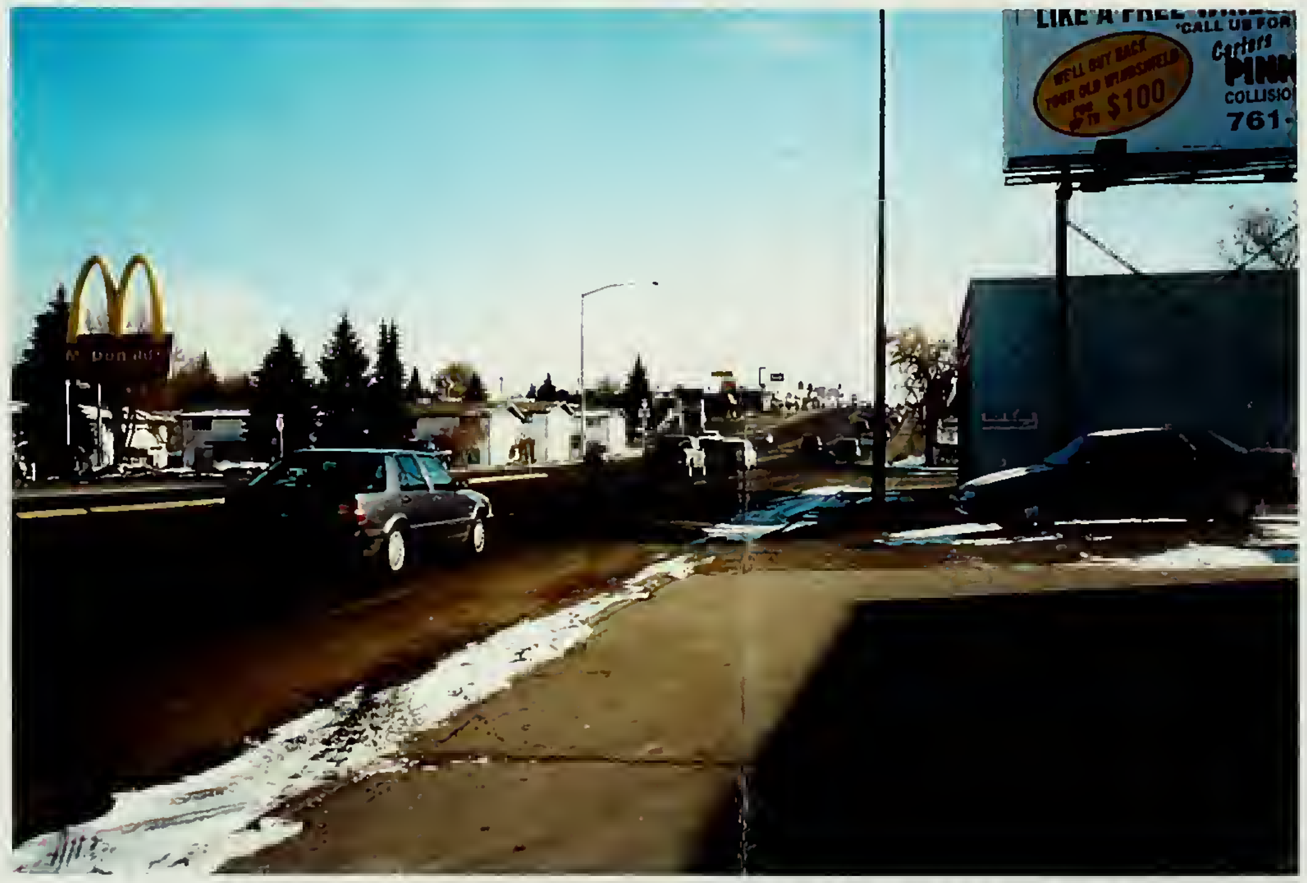
Figure 5A
Photographs of 10th Avenue South
Great Falls, 10th Avenue South
Environmental Assessment
Montana Department of Transportation
F 60-2(25)93, CN 1311

Viewpoint 4: Looking west from Holiday Village Mall entrance (at 11th Street).

Viewpoint 6: Looking west from between 13th and 14th Streets.



Viewpoint 5: Looking east from Holiday Village Mall entrance (at 11th Street).



Viewpoint 7: Looking east at 10th Avenue South from between 17th and 18th streets.

Figure 5B

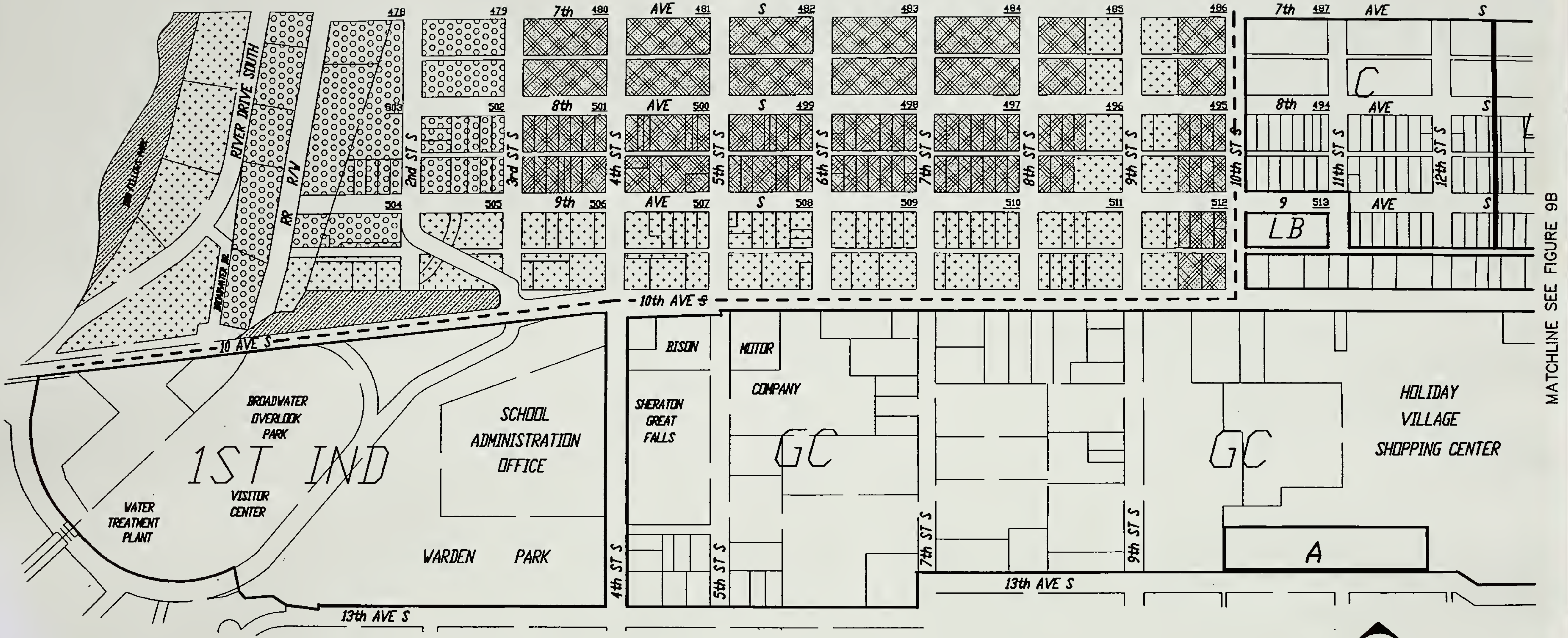
Photographs of 10th Avenue South

Great Falls, 10th Avenue South

Environmental Assessment

Montana Department of Transportation

F 60-2(25)93, CN 1311



Legend

- - - - Boundary of Revitilization Area

—— Boundary of Zoning Districts

Zoning within Revitilizotion Area

▩	Low–High Density Residential
⁘	Low–High Density Business
◌	Heovy Commerciol Business ond Light Manufacturing
▨	Public Lands
506	Block Number

Zoning Districts:

A	Residentiol
B	Residentiol
C	Residentiol
LB	Local Business
GC	Generol Commerciol
1ST IND.	Industrial

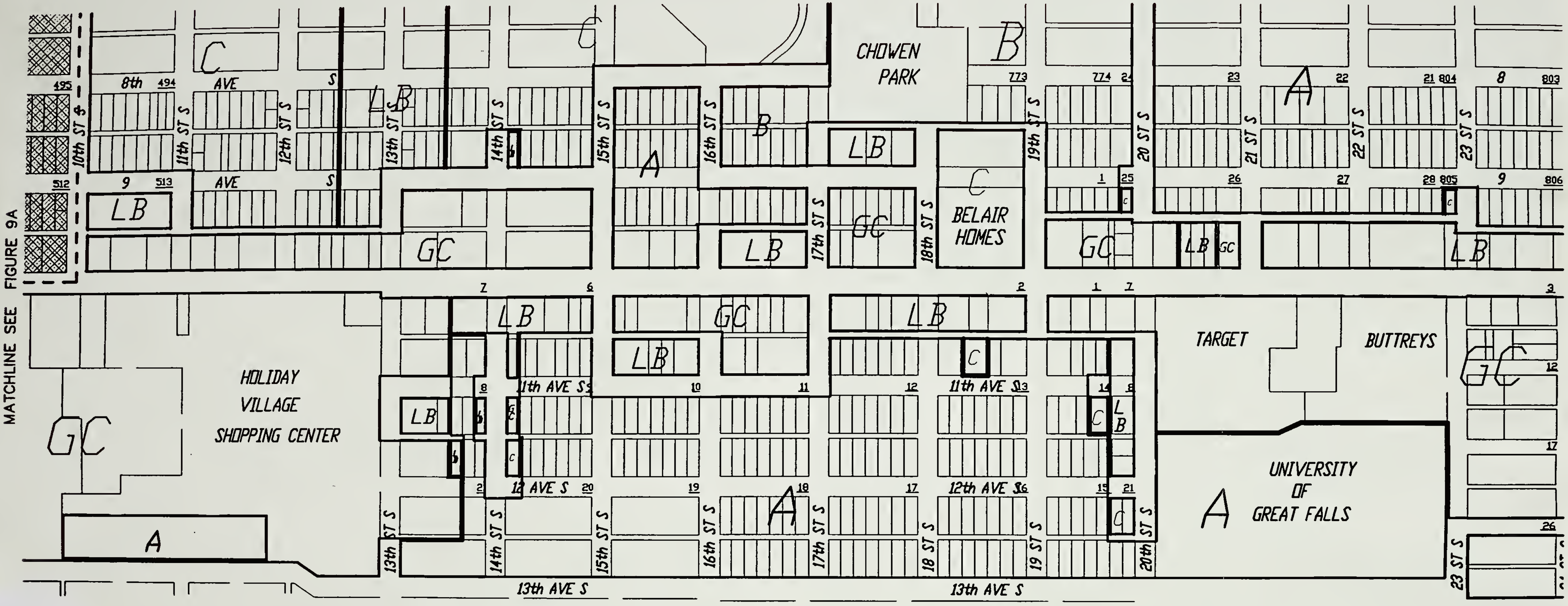
Source : Great Falls City–County Planning Board, 1993

SCALE : 1in=400ft
1in=122m

Figure 6A
City of Great Falls Zoning Map

Great Falls, 10th Avenue South Environmental Assessment

Montana Department of Transportation
F 60–2(25)93, CN 1311



Legend

- - - - Boundary of Revitilization Area
Zoning within Revitilization Area
▩ Low-High Density Residential
⁙ Low-High Density Business
○ Heavy Commercial Business and Light Manufacturing
▨ Public Lands
—— Boundary of Zoning Districts
Zoning Districts
A Residential
B Residential
C Residential
LB Local Business
GC General Commercial
1ST IND. Industrial
506 Block Number
SCALE : 1in=400ft
1in=122m

Source : Great Falls City-County Planning Board, 1993

Figure 6B
City of Great Falls Zoning Map

Great Falls, 10th Avenue South Environmental Assessment

Montana Department of Transportation
F 60-2(25)93, CN 1311

uses will continue to grow in this zone. Also, commercial growth along 10th Avenue South is expected to continue to be strong (Mountain West Research-North, Inc., 1985).

3.9.2 Population

Table 1 presents population estimates for the Great Falls Urban Transportation Study Area (see Figure 7). In addition, the table presents 1980 and 1990 US Census Bureau data. As shown in the table, both Cascade County and Great Falls experienced a decrease in population in the 1980s, but have seen an increase during the early 1990s. This increase is expected to continue through 2010.

3.9.3 Population Characteristics

In the 1990 Census, the City of Great Fall's population was characterized as being primarily white (92.6 percent), with people of other races or of Hispanic origin representing much smaller percentages: American Indian, Eskimo or Aleut (4.6 percent), black (1 percent) and Asian or Pacific Islander (1 percent); and Hispanic or people of Hispanic origin representing 1.7 percent (GFCCPB, 1993). The 1990 Census also determined that 1,902 families, or 10.8 percent of the Great Falls urban area total, were below the low-income level as defined by the 1990 Census (GFCCPB, 1993).[4]

For characterizing neighborhoods in the vicinity of the proposed project, it is broken down into census tracts, and then smaller block groups. The project segment of 10th Avenue South borders four census tracts (7, 8, 9 and 22); it forms the southern boundary of Census Tracts 7, 8 and 9, and the northern boundary of Census Tract 22. The smaller block groups in these tracts that are bordered by 10th Avenue South include Block Groups 2 and 3 in Tract 7, Block Group 2 in Tract 8, Block Group 3 in Tract 9 and Block Groups 1, 4 and 5 in Tract 22. These block groups generally cover the area bounded by 5th Avenue South on the north, 17th Avenue South on the south, River Road/2nd Street on the west and 20th Street on the east.

---

[4] In 1990, the determination of a "low-income family" was dependent on the size of the family and the total annual income level for the family. For example, in Great Falls, a two-member family under age 65 with a total annual income of $8,794 or less, or a six-member family with a total annual income of $17,839 or less, was considered "low-income."

Table 1
Population Estimates--City of Great Falls, Great Falls Urban Transportation Study Area and Cascade County

Year	City of Great Falls	Percent Change	Urban Transportation Study Area	Percent Change	Cascade County	Percent Change
1980	56,725[a]	--	68,035[b]	--	80,696[a]	--
1990	55,125[c]	-2.8%	66,736[b]	-1.9%	77,691[c]	-3.7%
1995			68,404[d]	+2.5%		
2000			71,004[d]	+3.8%		
2005			72,637[d]	+2.3%		
2010			74,525[d]	+2.6%		

[a] Source of data: US Bureau of Census, 1980.
[b] Source of data: GFCCPB, 1994.
[c] Source of data: MDOC, 1995.
[d] This projection was interpolated from the 1990 estimate and the growth rates estimated by the Mountain West Research-North, Inc. study (1985).

This area is larger than the 10th Avenue South corridor directly affected by the proposed project. However, income and minority information about this area provides a general representation of the socioeconomic characteristics of the neighborhoods near the project area. Table 2 presents low-income and minority data for this area.

As shown in the table, the percentages of low-income families at the tract level range from 7.7 percent in Tract 22 to 31.1 percent in Tract 7, and at the block group level they range from 4.0 percent in Block Group 22-4 to 50.0 percent in Block Group 7-3. Block Groups 7-3 and 9-3 have extremely high percentages of low-income families when compared to the percent of low-income families in the Great Falls Urban Transportation Study Area as a whole (10.8 percent). This indicates that the neighborhoods immediately north of 10th Avenue South between 2nd and 20th Streets can be characterized as relatively low-income.

The percentages of minorities at the tract level ranges from 4.6 percent in Tract 22 to 21.4 percent in Tract 7, and at the block grant level they range from 3.2 percent in Block Group 22-4 to 33.5 percent in Block Group 7-2. Like the trend for low-income families, the percentages of minorities residing in the tracts and block groups north of 10th Avenue South are also higher than the urban area (7.4 percent). South of 10th Avenue South, the percentages of minorities are less than the urban area total. The block groups with the highest percentages of minorities do not necessarily correlate to the block groups with the highest percentages of low-income families. Only in Block Group 9-3, do the high percentages of minorities correspond to a high percentage of low-income families.

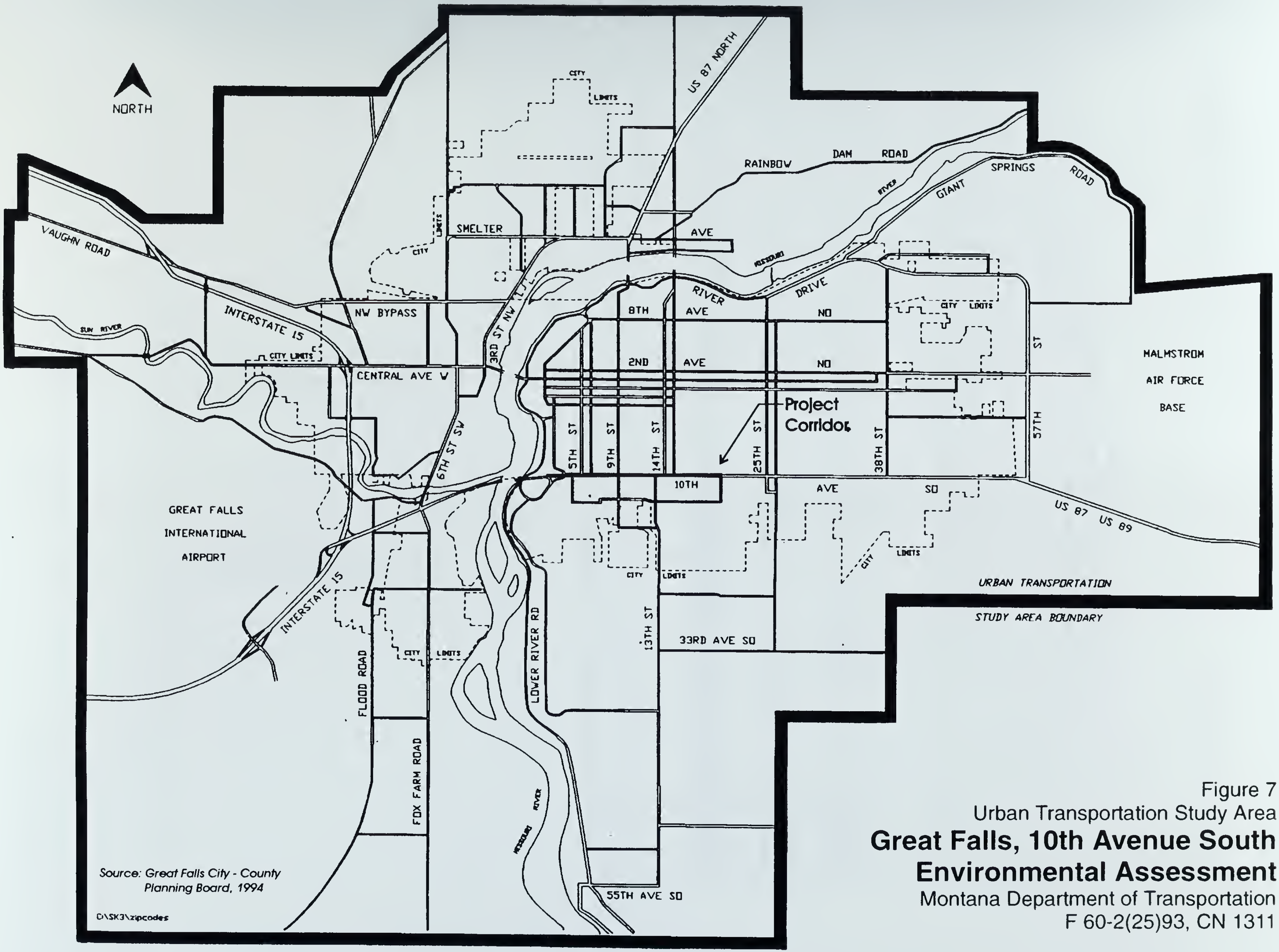


Figure 7
Urban Transportation Study Area

Great Falls, 10th Avenue South
Environmental Assessment

Montana Department of Transportation
F 60-2(25)93, CN 1311

Source: Great Falls City - County Planning Board, 1994

C:\SK3\zipcodes

Table 2
Low-Income Families and Minority Persons in the Vicinity of the 10th Avenue South Project Area[a]

Census Area	Low-Income Families[b]		Minority Persons[c]	
	Low-Income/Total	Percent in Area	Minority/Total	Percent in Area
Tract 7	*146 / 470*	*31.1%*	*403 / 1,881*	*21.4%*
--Block Group 7-2	10 / 66	15.2%	49 / 270	18.1%
--Block Group 7-3	39 / 78	50.0%	63 / 350	18.0%
Tract 8	*102 / 461*	*22.1%*	*277 / 1,846*	*15.0%*
--Block Grant 8-2	34 / 222	15.3%	152 / 868	17.5%
Tract 9	*172 / 893*	*19.3%*	*616 / 3,571*	*17.3%*
--Block Group 9-3	140 / 328	42.7%	461 / 1,375	33.5%
Tract 22	*119 / 1,548*	*7.7%*	*286 / 6,193*	*4.6%*
--Block Group 22-1	28 / 173	16.1%	31 / 619	5.0%
--Block Group 22-4	10 / 249	4.0%	26 / 815	3.2%
--Block Group 22-5	27 / 277	9.7%	78 / 1,353	5.8%

[a] Source of data: Finch, pers. comm., 1996.

[b] For Great Falls, "low-income" or "poverty" thresholds were determined based on total annual income per household and household size (number of persons in a unit) as shown below.

Poverty Threshold by Size of Unit	
Unit Size	*1990 Unit Income*
1 person	$ 6,652
1 person < 65 years old	$ 6,800
2 persons	$ 8,509
2 persons < 65 years old	$ 8,794
3 persons	$10,419
4 persons	$13,359
5 persons	$15,792
6 persons	$17,839
7 persons	$20,241
8 persons	$22,582
9 persons	$26,848

[c] Minorities include individuals who are members of the following population groups: American Indian, Eskimo or Aleut; Asian or Pacific Islander; Black, not of Hispanic origin; or anyone of Hispanic origin.

3.9.4 Housing

Along with the population decline, the rate of housing growth in the Great Falls area was slow during the 1980s and early 1990s. The housing demand and supply has also been increasing. Table 3 presents dwelling unit estimates for the Great Falls Urban Transportation Study Area. The average household size (persons per dwelling unit) decreased between 1980 and 1990, but is estimated to remain at about 2.3 persons per dwelling unit into the foreseeable future.

3.9.5 Employment

Table 4 presents employment estimates for the Great Falls Urban Transportation Study Area. As shown in the table, the rate of employment opportunities in the Great Falls area declined during the 1980s, and has slowly expanded in the early 1990s. Approximately 57 percent of all jobs in the study area are located within Super Zones 1, 2 and 5 which lie adjacent to 10th Avenue South (Mountain West Research-North, Inc., 1985).

3.9.6 Public Services

Public services that could be affected by the proposed project include law enforcement, fire protection, emergency response and schools. Law enforcement along 10th Avenue South and vicinity is provided by the City of Great Falls Police Department. The City has reciprocal agreements with the Montana Highway Patrol and Cascade County Sheriff's Department to provide support as needed. Fire protection and emergency response is provided by the City of Great Falls Fire Department. In addition, a private ambulance company provides emergency transportation in the City.

The Great Falls public school system consists of two public school districts--School District No. 1, and School District A; the project area is included in School District No. 1. School District No. 1 schools in the vicinity of the proposed project are listed below.

School Name	Location
Lincoln Elementary	624 27th Street South
Longfellow Elementary	1101 7th Street South
Sunnyside Elementary	1800 19th Street South
Paris Gibson Middle	2420 Central Avenue
East Middle	4040 Central Avenue
Great Falls High School	19th Street South and 2nd Avenue South

School District No. 1 contracts for bus service to serve students living outside the maximum walking distance (3.2 km [2 mi] for high school students, 2.4 km [1.5 mi] for middle school

Table 3
Dwelling Unit and Household Size Estimates--City of Great Falls, Great Falls Urban Transportation Study Area and Cascade County

Year	Great Falls Urban Transportation Study Area[a]	Percent Change	Average Household Size (persons/dwelling unit)
1980	28,776	--	2.36
1990	29,347	+2.0%	2.27
1995	29,844	+1.7%	2.29
2000	30,915	+3.6%	2.30
2005	31,622	+2.3%	2.30
2010	32,415	+2.5%	2.30

[a] Source of data: GFCCPB, 1994.

Table 4
Employment Estimates--City of Great Falls, Great Falls Urban Transportation Study Area and Cascade County

Year	Great Falls Urban Transportation Study Area	Percent Change
1980	31,850[a]	--
1990	30,776[a]	-3.4%
1995	31,915[b]	+3.7%
2000	32,681[b]	+2.4%
2005	33,204[b]	+1.6%
2010	36,611[b]	+%

[a] Source of data: GFCCPB, 1994.

[b] This projection was interpolated from the 1990 estimate and the growth rates estimated by the Mountain West Research-North, Inc. study (1985).

students and 1.6 km [1 mi] for elementary school students). Certain school busses use 10th Avenue South on their normal route.

High school students living south of 10th Avenue South, and within 3.2 km (2 mi) of Great Falls High School may walk across 10th Avenue South on their way to and from school. Middle school students living south of 10th Avenue South are bussed to East Middle School and, therefore, do not need to walk across 10th Avenue South. Paris Gibson Middle School students live north of 10th Avenue South or live far enough away (over 2.4 km [1.5 mi]) that they are bussed to school. Elementary school students that live within 1.6 km (1 mi) may walk to school, but do not need to cross 10th Avenue South because the service areas for the elementary schools do not cross 10th Avenue South. If they live over this distance, they are bussed to school.

Private schools in the vicinity of the proposed project include a nursery-preschool-kindergarten, Ursuline Center, at Central Avenue and 23rd Street, and an elementary school, Our Lady of Lourdes, at 5th Avenue South and 14th Street. Our Lady of Lourdes has its own bus service.

The Montana State University--College of Technology, Great Falls, is a state college located at the corner of 16th Avenue South and 20th Street. In addition, the University of Great Falls is a private university located at the corner of 12th Avenue South and 20th Street.

3.10 ALTERNATIVE TRANSPORTATION MODES

3.10.1 Public Transit Service

Great Falls is served by the Great Falls Transit District. This district operates two bus routes ('1' and '8') that travel along segments of 10th Avenue South. In addition to providing service to 10th Avenue South, Route 1 provides access to the central business district; and Route 8 provides access along 9th Street, and access to the State Fairgrounds at 3rd Street and the Northwest Bypass (across the Missouri River). At this time, there are no bus turnouts along 10th Avenue South. The busses that stop to let passengers on and off use the paved shoulders to make stops. However, the Holiday Village Mall (at km 150.9 [MP 93.8]) is a major bus transfer station where buses pull into the mall to stop for passengers.

3.10.2 Bicycle Facilities

There are no bicycle facilities (lanes) within the MDT right-of-way on 10th Avenue South. Due to the heavy traffic on this segment of highway, bicyclists generally use parallel roads instead of 10th Avenue South. Bicyclists that must travel along 10th Avenue South typically use the unmarked shoulder of the highway or sidewalks. Tenth Avenue South is not a designated bikeway facility on the Great Falls Bikeway Plan (GFCCPB, 1996). The plan shows that bikeways (bike lanes or routes) are planned to cross 10th Avenue South at 2nd Street, 9th Street, 11th Street and 20th Street, and bikeways planned to parallel 10th Avenue South include segments of 8th Avenue South and 13th Avenue South (GFCCPB, 1996).

3.10.3 Pedestrian Facilities

Pedestrian facilities along 10th Avenue South include the sidewalks, crosswalks and crossing ("walk/don't walk") signals at the intersections. Pedestrian usage along the highway is relatively low, with the majority of usage occurring at the east end of the corridor near the University of Great Falls and the Montana State University--College of Technology, Great Falls. Pedestrians are also "generated" by the motels, the nearby neighborhoods and the busses.

3.11 AIR QUALITY

According to US Environmental Protection Agency's (EPA's) regulations (**40 CFR 81.327**) the project corridor is in a carbon monoxide (CO) non-attainment area. The proposed project appears in the 1990-2010 Great Falls Transportation Plan and the Great Falls Transportation Improvement Program (TIP) Update prepared in accordance with the Clean Air Act, as amended (**42 USC 7401 et seq.**). The Federal Transportation Agency (FTA) and FHWA determined that the Great Falls TIP Update is in conformance with the Clean Air Act, as amended, based on the Transportation Conformity guidance (Final Rule) issued by the US EPA on November 24, 1993--see correspondence in Appendix B.

3.12 NOISE

In 1990, a traffic noise assessment was conducted by the MDT for the proposed project, using 1988 and 2012 traffic volumes to represent "present" and "design year" conditions, respectively (MDT, 1990a). This assessment was updated by MDT in 1995, using 1994 and 2018 traffic volumes to represent "present" and "design year" conditions, respectively (MDT, 1995b). The results of these analyses for "present" conditions are summarized in this section. The results of the "design year" analyses are summarized in Section 4.12, which addresses the long-term effects of the Reconstruction Alternative. Copies of these assessments are included in Appendix D.

Both assessments estimated noise levels based on the FHWA Traffic Noise Prediction Model. Also, for the 1990 study, ambient noise measurements were taken at five selected locations along the length of the project corridor and were used to adjust the values generated by the FHWA Model to account for the inherent limitations of the Model with regard to stop-and-go traffic. At only one site (#2001), were noise levels noticeably affected by accelerating and decelerating vehicles. The computer model produced values 4 dBA less than the values measured.[5] At all other locations, traffic was generally flowing more smoothly and predicted levels were within 1 to 2 dBA of measured values.

---

[5] "dBA" is the "A-weighted decibel" unit used for measuring noise levels. It is the frequency-weighted system that most closely represents the average human hearing response.

As noted above, ambient noise level measurements were taken at five locations. These included two single-family residences and an apartment complex fronting 10th Avenue South and two single-family residences located one-half block north and south of 10th Avenue South. There are three motels along the project corridor that are at approximately equal distances (or greater) from the centerline as the sites chosen. Noise levels are expected to be generally the same for similar distances at these locations due to the general uniformity of physical characteristics, traffic mix, and vehicle speeds along the highway. For this reason, noise measurements were not taken at every potentially noise sensitive location. The five sites selected are representative of all other similar locations throughout the project corridor based on proximity to the roadway and category of use (i.e., residence, church, school, motel, etc.). Table 5 describes the locations and noise levels at the five monitoring sites.

Site #2005 is the Belair Homes Addition (between 18th and 19th streets). This consists of numerous two-story apartment buildings. The lower floors of the three structures fronting the north side of 10th Avenue South are in a depressed area (lies below the elevation of the road) which provides some shielding from traffic noise. However, the second floor is not shielded and the projected noise levels given should be considered as those for receivers at second floor levels. Noise levels at the ground floor are approximately 3 dBA less.

As noted above, the 1995 update of the noise assessment estimated noise levels using 1994 traffic volumes for the "present" condition. The update used the same speed as in the 1990 study and similar distances from the centerline. Table 6 presents the results of the updated assessment.

In 1996, MDT developed a, "Traffic Noise Analysis and Abatement: Policy and Guidance" document that is consistent with FHWA's "Procedures for Abatement of Highway Traffic Noise and Construction Noise" (**23 CFR Part 772**). Both MDT's guidance and FHWA's procedures define noise impacts as occurring when the federal Noise Abatement Criteria (NAC) are approached (are within 1 dBA of) or exceeded. The exterior NAC for Category B activities/land uses (including schools, residences, motels, churches, and public meeting facilities) is Leq(h) = 67 dBA (MDT, 1996b). In accordance with these regulations, the present noise levels exceed the NAC at distances less than 45 m (148 ft) (MDT, 1995b). For the few residences that exist along the project corridor, noise impacts exist under "present" conditions.

Table 5
Noise Monitoring Locations and Noise Levels Under Present (1988) Traffic Conditions[a]

Site Numbers	Location	Land Use	Distance from Centerline	Present (1988) Noise Levels in Leq(h) dBA[b]
2001	Midway between 7th St. & 8th St., on south side of 10th Ave. So.	Single-Family Residence	20 m (65 ft)	71
2002	East side of 10th St. between 9th Ave. So. & 10th Ave. So. (1/2 block north of 10th Ave. So.)	Single-Family Residence	67 m (220 ft)	63
2003	Southeast corner of 10th Ave. So./18th St. intersection	Single-Family Residence	18 m (60 ft)	69
2004	West side of 18th St., between 10th Ave. So. & 11th Ave. So. (1/2 block south of 10th Ave. So.)	Single-Family Residence	67 m (220 ft)	63
2005	Midway between 18th & 19th streets, on north side of 10th Ave. So.	Apartment Complex	22 m (72 ft)	68

[a] Assumes 2.9 percent trucks, and a speed of 56 kph (35 mph).

[b] Leq(h) dBA is the average sound pressure level over an hour as measured in dBA (the frequency weighting system most representative of the average human hearing response.

Source: MDT, 1990a.

Table 6
Noise Levels Under Present (1994) Traffic Conditions[a]

Distance from Centerline	Leq(h) dBA Noise Levels
20 m (66 ft)	70
45 m (148 ft)	67
70 m (230 ft)	65

[a] Assumes 3.4 percent trucks, and a speed of 56 kph (35 mph).

Source: MDT, 1995b.

4. ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

This chapter includes long-term impacts (Sections 4.1 to 4.12), short-term construction-related impacts (Section 4.13), cumulative impacts (Section 4.17), and secondary effects (Section 4.18). In addition, it includes discussions of the project related to Section 4(f) of the US Department of Transportation Act and Section 6(f) of the National Land and Water Conservation Act (in Section 4.14), the Farmland Protection Act (in Section 4.15), and Environmental Justice (in Section 4.16). The applicable environmental laws to comply with and the permit required prior to project construction are described in Section 4.19.

4.1 SOILS AND GEOLOGY

4.1.1 No Action Alternative

The No Action Alternative would not require any grading or soil disturbance.

4.1.2 Reconstruction Alternative

No long-term adverse effects on soil resources would result from the Reconstruction Alternative. Therefore, no long-term mitigation measures would be needed.

4.2 HAZARDOUS MATERIALS

4.2.1 No Action Alternative

The No Action Alternative would not require relocation of the utilities. Therefore, the contaminated soil under the roadway would remain in place until such time as maintenance or relocation of the utilities in the contaminated areas is required for some other reason.

4.2.2 Reconstruction Alternative

With the Reconstruction Alternative, the long-term effects from hazardous materials would depend on the extent of the area from which the contaminated material would be removed (from the trenches only, from the utility trenches to the MDT right-of-way boundary, total removal from the MDT right-of-way, or leave in place/use as backfill). If an option other than "total removal" is selected, the utility trenches would need to be sealed to prevent them from acting as conduits for future contamination migration.

Long-Term Mitigation Measures--Hazardous Materials (HM).

HM-1. If the "total removal" option for clean-up of the contaminated soil is not selected and contaminated soil is left in place, utility trenches will be sealed to prevent them from acting as conduits for contamination migration. Specific details of the design, materials and methods for sealing the trenches will be developed prior to initiation of the construction activities.

4.3 WATER RESOURCES

4.3.1 No Action Alternative

The No Action Alternative would not alter the drainage pattern or the quality of runoff from 10th Avenue. The existing drainage problems (localized flooding) would continue to occur during heavy rainstorms.

4.3.2 Reconstruction Alternative

Surface Water

In the long-term, most of the area that would be affected by the widening of 10th Avenue is already paved (including the existing roadway, shoulder and sidewalk), the amount of stormwater runoff is expected to be approximately the same as under existing conditions.

Since the number of vehicles that would use 10th Avenue South and the surrounding streets is not expected to change substantially due to the proposed widening, the quality of stormwater runoff from 10th Avenue South is not expected to be degraded by the road widening.

Floodplain

Because the project would include improvements to the storm drain system (mid-block inlets and, in some segments, a supplemental trunkline on the south side of 10th Avenue South), drainage along the highway is expected to improve, and the extent of any localized flooding during heavy rainstorms would be reduced. This would be considered a beneficial effect.

No long-term mitigation measures would be required.

4.4 SENSITIVE, THREATENED, AND ENDANGERED SPECIES

4.4.1 No Action Alternative

The No Action Alternative would not effect on sensitive, threatened or endangered (STE) species since it would not result in any new construction or habitat changes. Also, as discussed in Section 4.4.2, there are no known STE species in the study area.

4.4.2 Reconstruction Alternative

The BA for the Reconstruction Alternative, prepared by MDT in 1992, concluded that the proposed project would not disturb bald eagle migrating or wintering activities; and no potential bald eagle nest, perch or roost trees would be removed or encroached upon by the project. Similarly, no disturbance of migrating peregrine falcons would occur. Although no effects are expected, MDT has a standard policy of using raptor-proof electrical facilities whenever they are required to replace or relocate these facilities for a MDT project. Since the Reconstruction Alternative would require the relocation of overhead electrical facilities, these facilities would be used as a precautionary measure. In addition, the BA recommended that the project area be re-evaluated by an MDT biologist during the nesting season prior to commencement of construction to ensure that the project area still has no bald eagle nests.

No disturbance of piping plovers or interior least terns would occur since no suitable habitat for these birds occurs in the project area. Also, no disturbance of black-footed ferrets would occur since they do not live in the project area. In summary, with implementation of the mitigation measures from the BA, the proposed project would have "no effect" on threatened or endangered species that could possibly occur in the general study area (bald eagle, peregrine falcon, black-footed ferret, interior least tern, and piping plover). The USFWS concurred with this finding (Hazelwood, pers. comm., 1996).

Long Term Mitigation Measures--Sensitive, Threatened, and Endangered Species (STE).

STE-1. An MDT biologist will re-investigate the project area during the nesting season prior to the initiation of construction to ensure that the project area still has no bald eagle nests.

STE-2. All relocated overhead electric facilities shall be raptor-proofed in accordance with MDT Procedure Memorandum #208--Raptor Proofing.

4.5 WETLANDS

4.5.1 No Action Alternative

The No Action Alternative would not affect ditch wetlands adjacent to 10th Avenue South.

4.5.2 Reconstruction Alternative

The Reconstruction Alternative would result in construction near the small ditch wetlands next to 10th Avenue South. However, effects on these wetlands are expected to be minimal, or would be avoided all together. Therefore, no long-term wetland mitigation measures would be needed.

4.6 HISTORICAL AND CULTURAL RESOURCES

4.6.1 No Action Alternative

The No Action Alternative would not affect historical or cultural resources listed on or eligible for listing on the National Register of Historic Places (NRHP) since it would not include any construction and no such resources were found in the study area.

4.6.2 Reconstruction Alternative

The historical structures found along 10th Avenue South are described in Section 3.6. These resources were evaluated in the cultural resources studies (GCM Services, Inc. 1989 and MDT, 1995a) for eligibility for the NRHP. Both studies recommended that these resources are not eligible because of their lack of integrity individually, the integrity of the sites and the general area which has been altered into a commercial area, and/or the bland architectural style (GCM Services Inc., 1989 and MDT, 1995a). The State Historic Preservation Office (SHPO) concurred with these recommendations (MDH, 1990b; MDT, 1996a; SHPO, 1989, 1990, and 1996)--see correspondence in Appendix B.

Therefore, the Reconstruction Alternative would not affect historical or cultural resources listed on or eligible for listing on the NRHP, and no long-term mitigation measures would be needed to protect historical and cultural resources.

4.7 VISUAL RESOURCES

4.7.1 No Action Alternative

The No Action Alternative would not affect views in the vicinity of 10th Avenue since the road would not be widened.

4.7.2 Reconstruction Alternative

In the long-term, the Reconstruction Alternative would not substantially alter the views of the highway and surrounding areas as seen from the highway and adjacent properties because most of the right-of-way is already paved. However, vehicles would be traveling closer to the residences and businesses on 10th Avenue South compared to the existing road configuration. This may be perceived as an adverse effect by a few residents and the business operators. However, most of the businesses are highway-oriented (i.e., face the highway and rely on the highway for business) versus pedestrian-oriented (i.e., rely on pedestrians for business). Also, the highway is already relatively close to the residences and businesses, and the widening project would not alter the overall visual characteristics of the highway (i.e., it would not substantially change the amount of pavement or the look of the structures and signs along the highway). Therefore, any adverse effect perceived by residents or business operators would be considered minor.

No long-term mitigation measures would be needed to protect visual resources.

4.8 LAND USES AND LAND USE PLANS

4.8.1 No Action Alternative

Land uses would not be altered with the No Action Alternative. However, this alternative would be inconsistent with the 1990-2010 Transportation Plan, which is an element of the Great Falls Planning Area Comprehensive Plan. The Transportation Plan recommends that the subject portion of 10th Avenue South be widened to a six-lane facility to meet the transportation needs of the City through 2010. Therefore, if this alternative is selected, the Transportation Plan may need to be amended by the GFCCPB, accordingly.

4.8.2 Reconstruction Alternative

Land Uses

In the long-term, the Reconstruction Alternative would not alter land uses along 10th Avenue South or any of the detour routes. Nor would this alternative require the displacement or relocation of any businesses or residences.

Only a limited amount of right-of-way would need to be acquired. It would consist of many relatively small pieces of select lots that front 10th Avenue South; ranging in size from 0.00012 ha (0.00029 ac) to 0.017 ha (0.04 ac), and totalling approximately 0.066 ha (0.163 ac) for the length of the project. Most of this would be needed to relocate the luminaire poles and to enlarge the curb radii at selected intersections.

According to the property owner, acquisition of property at the southwest corner of 10th Avenue South and 9th Street, could impact the Pardis Chiropractic Clinic property (at approximately km 151.3 [MP 94.0]), resulting in the need for MDT to coordinate with the property owner to relocate the sign and reconfigure some of the parking spaces on the east side of the building. At the other locations, the parking spaces would not be affected due to the relatively small frontage needed for the road widening.

After construction, access to the businesses along 10th Avenue South would not be affected since the number and location of driveways would not change.

Land Use Plans

As discussed in Section 1.3, this alternative would be consistent with the goals and policies of the existing Transportation Plan which calls for the reconstruction of 10th Avenue to a six-lane facility. Also, this alternative would be consistent with the zoning and Comprehensive Plan land use designations for land along 10th Avenue South because it would not alter land uses or zoning along this corridor, and would support commercial uses along 10th Avenue South by improving the traffic flow along the highway.

Long-Term Mitigation Measures--Land Use and Land Use Plans (LU).

LU-1. During property acquisition negotiations, MDT will work with the affected property owners to minimize long-term effects on signage and parking, and, where necessary, will help to develop signage and parking plans that will retain the same or similar signage and the existing number of parking spaces.

4.9 SOCIOECONOMICS

4.9.1 No Action Alternative

In the long-term, the No Action Alternative could indirectly affect businesses along 10th Avenue South due to future increases in traffic congestion. Business patrons who drive may choose to do business elsewhere as driving into and out of the commercial area becomes more congested. This could result in negative economic effects on businesses along the highway and surrounding areas. No effects on residents or the housing supply would result from the No Action Alternative.

The growing traffic congestion problems on 10th Avenue South could eventually affect response times for those agencies providing law enforcement, fire protection and other emergency response services.

4.9.2 Reconstruction Alternative

The Reconstruction Alternative would not have any long-term adverse effects on the population, housing or businesses in Great Falls. It would not induce or deter the projected growth of population, housing and jobs in the Great Falls area beyond that which is already projected. It would accommodate this growth by improving motor vehicle travel within and through Great Falls.

The proposed project would not have a long-term adverse effect on the residential areas along 9th Avenue South since the traffic detours that would be in effect during the construction periods would cease after completion of the project. Nor would it result in the displacement of any residents or businesses. Indirectly, the long-term improvement in traffic flow along 10th Avenue

South could have a long-term beneficial economic effect on businesses along 10th Avenue South and surrounding commercial areas; and on the City of Great Falls due to increased tax revenues.

In the long-term, the improved traffic flow on 10th Avenue South could help to maintain or improve response times for agencies providing law enforcement, fire protection and other emergency response services.

In accordance with Executive Order 12898, the project's effects on minority persons and low-income families is discussed in Section 4.16. As stated in that section, there would not be any adverse effects on minority persons or low-income families.

No long-term socioeconomic mitigation measures would be required.

4.10 ALTERNATIVE TRANSPORTATION MODES (PUBLIC TRANSIT SERVICE, AND BICYCLE AND PEDESTRIAN FACILITIES)

4.10.1 No Action Alternative

With the No Action Alternative, traffic congestion along 10th Avenue South would increase. Without the highway widening to six lanes, the LOS is projected to be "D" by 2000 and "E" by 2010.

In addition, the surface of the roadway would continue to deteriorate, requiring more frequent maintenance. Eventually, this would lead to more frequent traffic disruptions.

Because the water mains would remain under the center of the highway, future operation and maintenance activities along this roadway could periodically exacerbate the traffic congestion.

4.10.2 Reconstruction Alternative

In the long-term, the Reconstruction Alternative would increase the capacity of the highway. This would maintain the LOS on the highway at "C," which is an acceptable level of service. Therefore, this alternative would have a beneficial effect on motor vehicle traffic travelling in and through Great Falls.

As part of the Reconstruction Alternative, the water main that currently lies down the approximate center of 10th Avenue South would be permanently relocated to the side or sides of the highway. In the long-term, this would improve access to the water main for future operation and maintenance activities, and would be less disruptive to traffic on the highway during these future activities.

The road improvements would also include the placement of additional storm drains and inlets along 10th Avenue South in areas that are currently in need of additional drainage facilities to relieve the localized flooding that occurs during heavy rainstorms. Therefore, the flooding and related traffic problems would be relieved due the proposed improvements.

The Reconstruction Alternative would provide an additional travel lane in each direction. For the most part, these lanes would be constructed within the existing paved shoulders of the highway. With the addition of the new travel lanes, public transit busses would stop within the outside lane of travel, requiring that motor vehicles behind them temporarily slow down or stop. Because the outside lane is the primary lane used for slower traffic and traffic turning into and out of driveways along the highway, bus movements are not expected to have an adverse effect on this traffic. Nor are the busses expected to be substantially affected by other motor vehicle traffic. No bus turnouts are planned at this time. However, the Holiday Village Mall would continue to operate as a major transfer station. Bus stop signage along 10th Avenue South would be relocated as needed during or after construction.

Because the Transportation Plan does not designate any bikeway facilities along 10th Avenue South, bicycle transportation would not be substantially affected by this alternative. Bicyclists would continue to use other streets due to the heavy traffic flow on 10th Avenue South.

With the road widening, the amount of time needed to cross the highway at the intersections could increase by a few seconds. The proposed improvements would upgrade the sidewalks, crosswalks and crossing signals to meet the accessibility standards of the ADA. This would include wheelchair ramps and lower cross-walk push buttons. The timing of the pedestrian crossing signals would be evaluated and, if necessary, would be adjusted to provide additional time for pedestrian crossings.

Long-Term Mitigation Measures--Alternative Transportation Modes (AT).

AT-1. Sidewalks, crosswalks and pedestrian crossing signals will be upgraded to meet ADA standards. If necessary, the timing of the pedestrian crossing signals will be adjusted to provide more time for pedestrian crossings.

AT-2. As needed, MDT or its contractor will coordinate with the Great Falls Transit District to minimize effects on bus service along 10th Avenue South. If necessary, the Transit District will detour around the construction zones and temporarily relocate bus stops.

4.11 AIR QUALITY

4.11.1 No Action Alternative

The No Action Alternative would not be consistent with the Great Falls Transportation Plan and TIP. As such, it would not conform with the Clean Air Act Amendments of 1990 (FHWA, 1997).

4.11.2 Reconstruction Alternative

In the long-term, the Reconstruction Alternative would improve traffic flow (reduce stopping and idling time) along 10th Avenue South. Therefore, it is expected that CO emissions generated by motor vehicles on 10th Avenue South would be reduced. Thus, the project would have a long-term beneficial air quality effect.

The Reconstruction Alternative was found to conform with the Clean Air Act Amendments of 1990 (FHWA, 1997).

No long-term air quality mitigation measures would be needed.

4.12 NOISE

This section is summarized from the noise assessments prepared by MDH and MDT in 1990 and 1995, respectively. Copies of these studies are included in Appendix D.

4.12.1 No Action Alternative

Table 7 presents future noise levels under design year 2012 peak traffic volumes with the No Action Alternative (only four lanes on 10th Avenue South). At distances up to 37 m (120 ft) from the centerline of 10th Avenue South, the NAC for Category B of Leq(h) = 67 dBA would be equalled or exceeded during periods of traffic flow equal to the 2012 design hourly volumes.[6] Table 7 also includes the estimated noise levels for present (1988) conditions; these are shown for comparison purposes. As shown, noise levels would increase approximately 1 to 2 dBA over present peak hour noise levels.

---

[6] As stated in Section 3.12, "Category B" land uses include schools, residences, motels, churches, and public meeting facilities.

4.12.2 Reconstruction Alternative

Table 7 also presents the future noise levels under the design year 2012 peak traffic volumes with the Reconstruction Alternative (six-lanes on 10th Avenue South). As shown on the table, traffic noise levels for the six-lane alternative would be the same as the No Action Alternative, and would increase approximately 1 to 2 dBA over existing peak hour noise levels.

Table 7
Noise Levels Under Design Year (2012) Traffic Conditions[a]
for No Action and Reconstruction Alternative

Site Numbers	Distance from Centerline	Noise Levels in Leq(h) dBA		
		Present (1988) Conditions[b]	No Action Alt. Design Year[b] (2012)	Reconstr. Alt. Design Year[c] (2012)
2001	20 m (65 ft)	71	72	72
2002	67 m (220 ft)	63	64	64
2003	18 m (60 ft)	69	71	71
2004	67 m (220 ft)	63	64	64
2005	22 m (72 ft)	68	70	70

[a] Assumes 2.9 percent trucks, and speed of 56 kph (35 mph).
[b] Assumes four travel lanes on 10th Avenue South.
[c] Assumes six travel lanes on 10th Avenue South.

Source: MDT, 1990a.

Also, at distances up to 37 m (120 ft) from the centerline, the NAC for Category B land uses of Leq(h) = 67 dBA would be equalled or exceeded during periods of traffic flow equal to the 2012 design hourly volumes.

MDT's Noise Policy (MDT, 1996b) and federal "Procedures for Abatement of Highway Traffic Noise and Construction Noise" (**23 CFR Part 772**) define noise impacts as occurring when future traffic noise levels would substantially exceed existing noise levels (an increase of 10 dBA or greater), or when the NAC is approached or exceeded. If substantial impacts would result from a project, noise abatement measures must be considered and implemented where reasonable and feasible. In this case, the projected noise level increases are less than substantial (only 1 to 2 dBA).

As with the No Action Alternative, the NAC for Category B land uses would be equalled or exceeded up to 37 m (120 ft) from the centerline of 10th Avenue South with the Reconstruction Alternative. The vast majority of residences in the vicinity of the project corridor are at least 67 m (220 ft) from the centerline of 10th Avenue South and front on 9th Avenue South or 11th Avenue South. Only the two identified single-family units and the Belair Addition apartment complex are within 37 m (120 ft) of the centerline. As discussed in Section 3.12, these locations already exceed the NAC Category B criteria under "present" conditions. Increases in noise levels by 2 to 3 dBA are not detectable by the human ear. Therefore, the projected design year noise level increases of 1 to 2 dBA would not be noticeable.

The existence of numerous approaches and side streets along 10th Avenue South make noise mitigation in the form of barriers extremely difficult, if not totally ineffective due to the many access openings required. There do not appear to be any other mitigation measures available. The majority of structures along 10th Avenue South are commercial in nature. All commercial uses are considered as NAC Category C, Leq(h) = 72 dBA. This level would not be exceeded at distances greater than 20 m (65 ft) from the centerline of 10th Avenue South.

In summary, traffic noise levels would increase slightly by the design year 2012. Although NAC Category B levels would be exceeded with or without the proposed action. By providing an additional two lanes, traffic flow would be improved. This should result in somewhat less congestion and possibly less acceleration and deceleration of vehicles. Though it would not likely be noticeable, the resultant noise levels should be somewhat less. If this occurs, it would be a beneficial noise effect.

The 1995 update of the noise assessment estimated noise levels using 2018 traffic volumes for the "design year" condition. The update used the same speed as in the 1990 study and similar distances from the centerline. Table 8 presents the results of the updated assessment for design year conditions. Noise levels for present (1994) conditions are also shown for comparison purposes.

As shown, the design year traffic noise levels would increase by only 1 dBA over present condition traffic noise levels. This increase would not be noticeable. Conclusions from the earlier (1990) noise assessment would not be altered by this noise assessment update. No long-term noise mitigation measures are feasible.

Table 8
Noise Levels Under Present (1994) and Design Year (2018) Traffic Conditions[a]

Distance from Centerline	Leq(h) dBA Noise Levels	
	Present (1994) Conditions	Design Year (2018) Conditions
20 m (66 ft)	70	71
45 m (148 ft)	67	68
70 m (230 ft)	65	66

[a] Assumes 3.4 percent trucks and a speed of 56 kph (35 mph).

Source: MDT, 1995b.

4.13 CONSTRUCTION IMPACTS

4.13.1 No Action

Grading

With the No Action Alternative, no ground disturbance or grading would be required.

Hazardous Materials

With the No Action Alternative, the need to expose, excavate, and dispose of contaminated soil (soil with contaminant concentrations that exceed DEQ clean-up guidelines[7]) from the utility trenches would not occur as a result of this project. However, it should be recognized that future maintenance and/or upgrade activities for these utilities, not related to highway reconstruction, could expose contaminated soil, and thus would require that clean-up and disposal of the contaminated soil be conducted. If this occurred, options for disposal of the contaminated soil would most likely be similar to those being considered for the Reconstruction Alternative (see "Hazardous Materials" subsection of Section 4.13.2 for further discussion of these options).

---

[7] The DEQ soil clean-up standard for BTEX (total concentration of benzene, toluene, ethylbenzene and xylenes) is 10 parts per million (ppm), and for GRO (gasoline range organics) or DRO (diesel range organics) it is 100 ppm.

Also, with this alternative, there would be no potential for spills of petroleum products from construction equipment that could degrade the quality of runoff from the highway.

Erosion and Sedimentation

With the No Action Alternative, there would be no potential for additional sediment loads into runoff from erosion of exposed soils.

Sensitive, Threatened, and Endangered Species

Because no construction would occur with the No Action Alternative, there would be no effect on sensitive, threatened, or endangered (STE) species that could potentially occur in the vicinity of the project (see discussion of STE species in Section 3.4). With this alternative, the overhead electric facilities within the project corridor would not be raptor-proofed.

Wetlands

The No Action Alternative would not affect the ditch wetland area adjacent to the project corridor since no construction would take place.

Historical and Cultural Resources

As stated in Section 4.6.2, there are no historical or cultural resources listed on or eligible for listing on the NRHP known to exist along the subject portion of 10th Avenue South.

Visual Resources

Since no construction would occur, there would be no short-term visual impacts along 9th Avenue South or 10th Avenue South.

Land Uses

With the No Action Alternative, there would be no short-term impacts on land uses along 9th Avenue South and 10th Avenue South.

Socioeconomics

The No Action Alternative would not result in short-term beneficial effects on employment that would be created by construction-related jobs, and by construction workers spending money at the businesses along 10th Avenue South. Nor would this alternative have the potential short-term negative effects on the 10th Avenue South businesses that might occur due to traffic detours and potential short-term access modifications for those businesses.

Public services, such as emergency access and school bus routes, would not be affected by this alternative.

Traffic

With the No Action Alternative, there would be no short-term detours or inconveniences for businesses and residents along 9th Avenue South and 10th Avenue South.

Alternative Transportation Modes (Public Transit Service, and Bicycle and Pedestrian Facilities)

The No Action Alternative would not create short-term disruption of traffic along 10th Avenue South, nor detour traffic onto 9th Avenue South. This alternative would not have any short-term effect on public transit service, or bicycle or pedestrian facilities along these streets.

Air Quality

The No Action Alternative would not generate a short-term increase in dust and exhaust emissions since no grading would occur, and no construction equipment would be used.

Noise

With the No Action Alternative, there would be no short-term increase in noise along 9th Avenue South or 10th Avenue South.

4.13.2 Reconstruction Alternative

Grading

Most of the grading for the Reconstruction Alternative would be associated with the upgrading of the sanitary sewer and storm drain facilities and relocation of the water lines that are currently located down the center of 10th Avenue South. The water lines are to be moved to either one side or both sides of the highway to allow for easier access for future operation and maintenance activities. Grading would also be required to maintain the grade of the new travel lanes and sidewalks. MDT estimates that approximately 29,000 cubic meters (m^3) (38,000 cubic yards [yd^3]) of soil material would need to be excavated and 115 m^3 (150 yd^3) of soil material would be needed for backfill (Teberg, pers. comm., 1996). Excess soil excavated from the highway bed that is found to be contaminated and not suitable for backfill (it exceeds Montana Department of Environmental Quality [DEQ] clean-up guidelines) would be hauled to a licensed, commercial landfarm in the Great Falls area that already has environmental clearances in place.

It is estimated that up to 2,678 m^3 (3,500 yd^3) of contaminated soil could be excavated depending on the extent of area from which contaminated soil would be removed. Further discussion of the contaminated soil removal alternatives is found in the following section.

Grading-related mitigation measures are listed in the "Hazardous Materials" and "Erosion and Sedimentation" subsections below.

Hazardous Materials

Replacement of the 10th Avenue South roadbed through the majority of the project area would require excavation to depths shallower than 0.9 m (3 ft). It is expected that in several locations, contaminated soil and/or groundwater could be exposed. As noted above, the greatest potential for intercepting contaminated soil and/or groundwater would occur during the upgrading of the sanitary and storm sewers, and the relocation of the water mains (to be conducted by the City of Great Falls). These activities would involve excavation of trenches along the perimeters of the MDT right-of-way to depths of up to 4.6 m (15 ft) below the ground surface.

Four options are being evaluated for removal of contaminated soil with contaminant concentrations exceeding DEQ clean-up guidelines. A description of each option is provided below:

1. **Total Removal**: removal of all contaminated soil beneath MDT right-of-way which exceeds DEQ clean-up guideline concentrations,

2. **Trenches to MDT Right-of-Way**: removal of contaminated soil exceeding DEQ clean-up guidelines within the utility trenches and outward to MDT right-of-way lines.

3. **Trenches Only**: removal of contaminated soil exceeding DEQ guidelines from the proposed utility trenches only; and,

4. **No Action/Leave in Place or Backfill**: leave contaminated soil in-place or use as backfill.

Table 9 presents a summary of the estimated soil volumes associated with the four removal options. The volumes presented in the table were estimated using the information (e.g. contaminant concentrations and soil types) gathered and the preliminary construction design plans. The volumes could increase since additional contaminated soil could be encountered during the excavation activities. Contaminated soil excavated during the reconstruction and not used as backfill, as well as any groundwater encountered during the excavation, would be hauled to a licensed commercial landfarming facility in the Great Falls area for disposal.

During excavation, groundwater could be encountered. However, preliminary estimates indicate that the volume of groundwater would not warrant dewatering of the soil prior to hauling.

With the proposed mitigation measures, no short- or long-term exposure to, or hazards from, contaminated soils would occur due to the proposed project.

Table 9
Estimated Amount of Excavated Soil
With Each Remediation Alternative

Location (business adjacent to MDT right-of-way where soil is to be excavated)	*Total Removal*		*Trenches to Right-of-Way*		*Trenches Only*		*No Action/Leave in Place or Backfill*	
	cubic meters	*cubic yards*	*cubic meters*	*cubic yards*	*cubic meters*	*cubic yards*	*cubic meters*	*cubic yards*
Pardis Chiropractic Clinic	688	900	306	400	115	150	0	0
Montgomery Ward	306	400	153	200	46	60	0	0
Fast Car Wash	459	600	306	400	69	90	0	0
Holiday Village	612	800	306	400	46	60	0	0
Taco Treat	612	800	306	400	115	150	0	0
Total	**2,677**	**3,500**	**1,377**	**1,800**	**391**	**510**	**0**	**0**

Source: Maxim, 1995.

During construction for the Reconstruction Alternative, stormwater runoff could be contaminated by spills of petroleum products from the construction equipment. MDT will require that each contractor prevent the spilling or dumping of petroleum products or other polluting or toxic agents.

Erosion and Sedimentation

During grading and construction for the Reconstruction Alternative, there could be increased sediment levels from unpaved and disturbed soil surfaces. In compliance with DEQ's Montana Pollutant Discharge Elimination System Regulations (**ARM 16.20.1314**), MDT would submit an Erosion Control Plan (ECP) to DEQ's Permitting and Compliance Division. This plan would include Best Management Practices (BMPs) established by MDT's Highway Construction Standard Erosion Control Workplan. The objective would be to minimize erosion of disturbed areas during and following construction of the proposed project.

In accordance with **Sections 7-22-2152, 60-2-208 M.C.A.**, MDT would establish a permanent desirable vegetation community along all areas disturbed by the proposed construction. A set of revegetation guidelines would be developed by MDT that must be followed by the contractor. These specifications would include instructions on seeding methods, seeding dates, types and amount of mulch and fertilizer, along with seed components. Seed mixes include a variety of species to assure that areas disturbed by construction are immediately stabilized by negative cover. The Seeding Special Provisions developed for this proposed project would be forwarded to the Cascade County Weed Board for approval.

Sensitive, Threatened, and Endangered Species

Since no STE species are known to have nests or habitat in the study area, no short-term impacts from the Reconstruction Alternative would occur.

Wetlands

With the Reconstruction Alternative, construction activities would occur near the ditch wetlands along 10th Avenue South. Impacts are expected to be minimal or avoided all together. At most, associated wetland impacts would be less than 0.4 ha (0.1 ac). As a policy, the US Army Corps of Engineers (COE) does not consider jurisdictional those wetland ditches that were formed in upland areas and later developed wetland characteristics. Therefore, filling or disturbance of these wetlands would not require that the COE issue a Section 404 Permit.

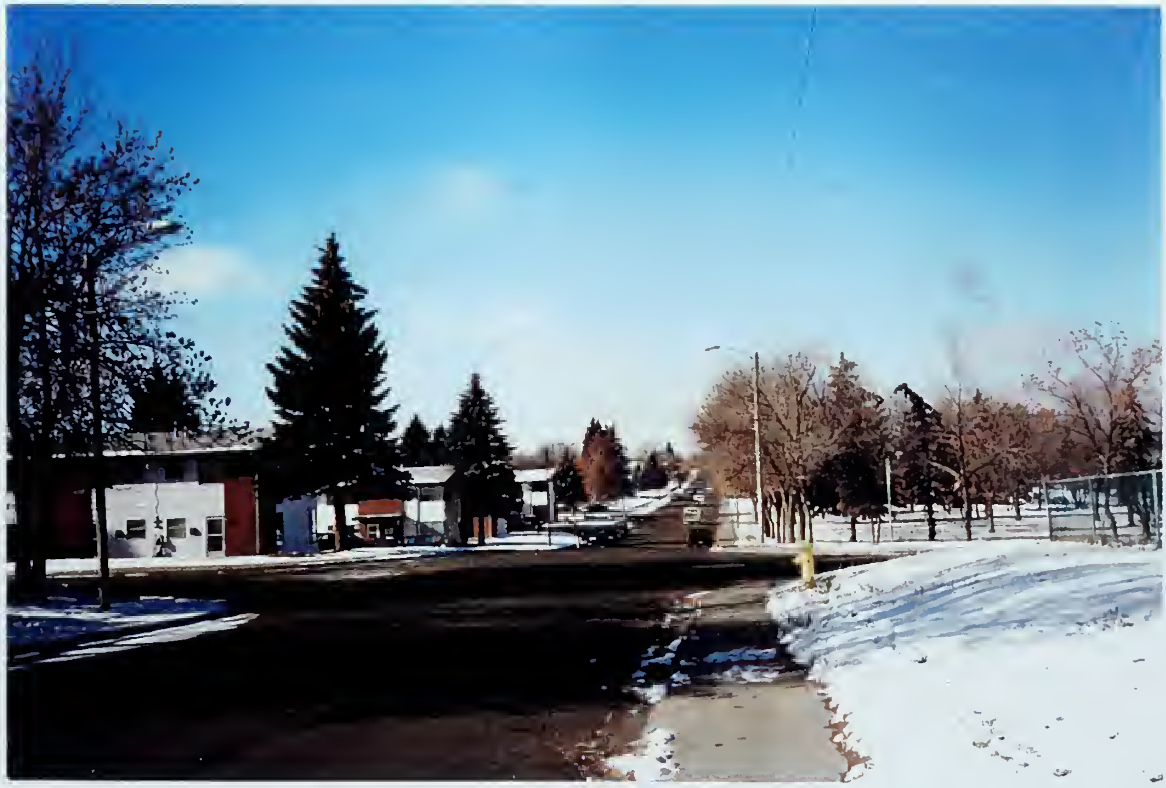
Historical and Cultural Resources

As stated in Section 4.6.2, no historical or cultural resources listed on or eligible for listing on the NRHP are known to exist within the area of potential effect for the proposed project. Thus, no construction-related "adverse effects" on historical or cultural resources would occur. The proposed cultural resources mitigation measure is only presented in case cultural artifacts are discovered during the construction phase.

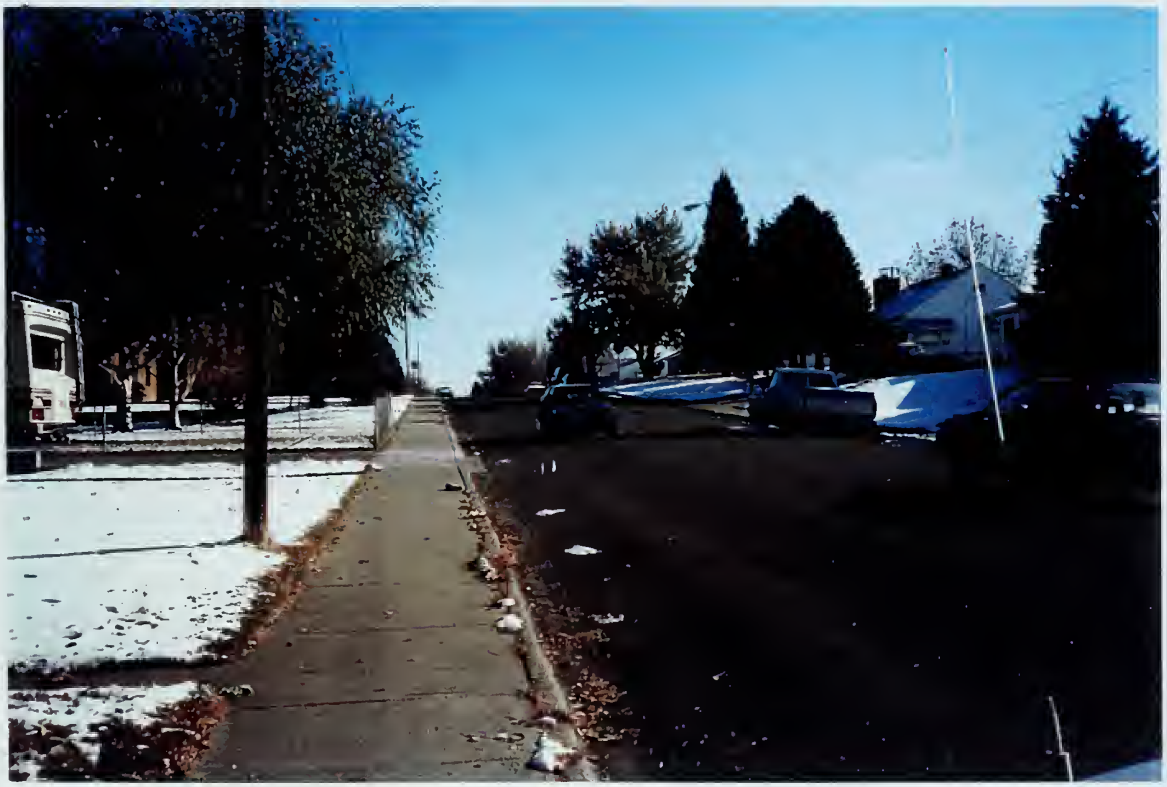
Visual Resources

During the construction phase, construction equipment and stockpiled materials would be visible within MDT right-of-way. This could be perceived as an adverse visual effect by residents and business owners/operators along 10th Avenue South. However, because 10th Avenue South is primarily commercial, and construction would occur over a relatively short time frame (two summers), this impact is considered to be minor.

The portion of 9th Avenue South that would be used as a temporary detour route has mixed residential uses and a few commercial uses. Properties along this portion of 9th Avenue South are landscaped with trees and shrubs typical of a residential street. Figure 8 shows representative views along 9th Avenue South (see Figure 4 for the location of these views). With the exception



Viewpoint 8: Looking west along 9th Avenue



Viewpoint 9: Looking east along 9th Avenue

Figure 8
Photographs of 9th Avenue South

Great Falls, 10th Avenue South
Environmental Assessment
Montana Department of Transportation
F 60-2(25)93, CN 1311

of the short-term increase in traffic and the temporary traffic control devices at the cross streets, the visual resources along this street would not be altered by this alternative.

No short-term visual resources mitigation measures are needed.

Land Uses and Land Use Plans

As discussed in Section 3.8, land uses along 10th Avenue South are primarily commercial, with a few residential properties. Land uses along 9th Avenue South between 2nd Street and 20th Street include mostly residential uses with a scattering of commercial uses, and a few undeveloped lots. During construction, accessing some residential and commercial properties along 9th Avenue South and 10th Avenue South could require out of the way travel. This impact would not alter the existing land uses in the study area or adversely affect relevant land use plans. It could result in short-term inconveniences for residents, business patrons and employees, and could have negative economic impacts on some affected commercial properties. (See the following sections on "Socioeconomics" and "Traffic/Transportation" for further discussion of these impacts and applicable mitigation measures.)

No short-term land use or land use plan mitigation measures are needed.

Socioeconomics

In the short-term, the Reconstruction Alternative would have short-term beneficial effects on employment because it would create construction-related jobs. In addition, construction workers would most likely spend money at the businesses along 10th Avenue South, and thus would have a short-term beneficial effect on these businesses.

However, it is also possible that the necessary detouring of vehicle and truck traffic around the construction zones could have a negative economic effect on 10th Avenue South businesses. The traffic plan would reduce this impact by maintaining access to all properties, and, where necessary, providing signs to identify the temporary access changes.

During construction, emergency access would be maintained to both 9th Avenue South and 10th Avenue South, and to all the properties along these streets. Prior to construction, MDT would notify the City of Great Falls Police and Fire departments, the Cascade County Sheriff's Department and the Montana Highway Patrol about the proposed reconstruction and traffic control plan to ensure that emergency access and response times are not adversely affected.

School bus routes may need to be altered to avoid 10th Avenue South construction, and to compensate for the one-way/detour routing on 9th Avenue South. MDT would notify the public about the proposed reconstruction of 10th Avenue South and the traffic control plan. With this notification, no adverse effects on the school district's bus service are expected.

Traffic

Traffic Control Plan. During construction, trucks would be routed around 10th Avenue South via existing roadways. These routes are shown on Figure 9. Signing for truck routing would be placed and maintained for the duration of construction, and then removed upon completion of the construction.

Trucks approaching Great Falls from the east on US 87/US 89 that would normally continue west along 10th Avenue South would be re-routed north along 57th Street, then west to 15th Street North and across the Missouri River. Trucks would have the option of continuing north onto US 87, or turning west onto Smelter Avenue to 3rd Street Northwest (NW), then west onto NW Bypass or Central Avenue West to access I-15. Trucks approaching Great Falls from the west that would normally travel eastbound through Great Falls on 10th Avenue South, would be re-routed along the same routes in the reverse.

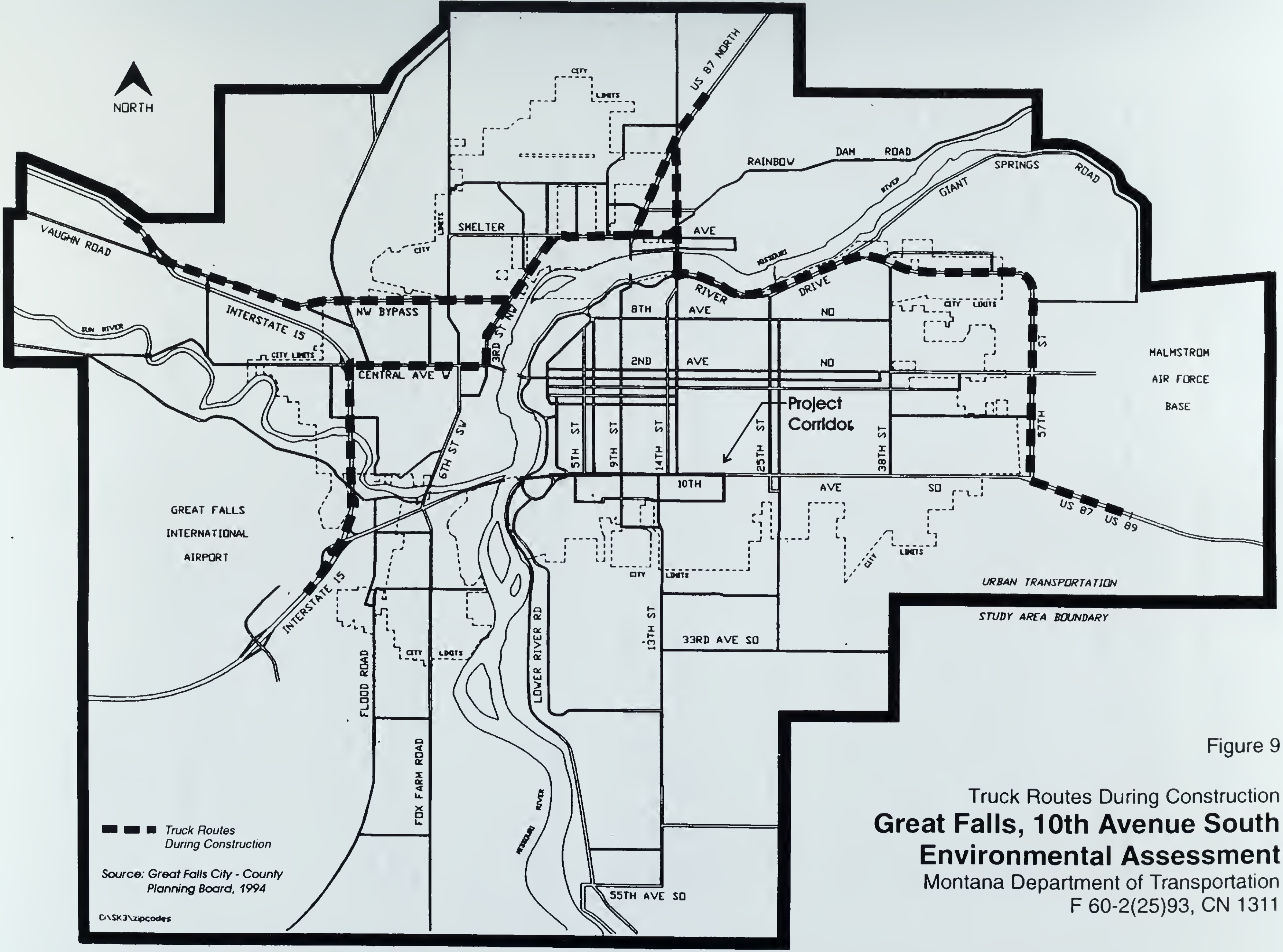
For the two summers of construction, both lanes on 9th Avenue South between 2nd Street and 19th Street would be designated for one-way westbound traffic.[8] Project construction would be divided into 13 work zones. Where work occurs on the south side of 10th Avenue South, the eastbound traffic would be shifted to the north side of the highway. Segments of 9th Avenue South would also be part of the westbound detour route around construction zones on 10th Avenue. Where appropriate, westbound traffic would be detoured north on a side street to 9th Avenue South, then west and back to 10th Avenue South, or continue west on 9th Avenue South. Temporary traffic signals would be provided along 9th Avenue South at the major intersections, as well as stop signs at other intersections to stop traffic on the approaches to 9th Avenue South and to provide safer crossing conditions for traffic, bicyclists and pedestrians. The posted speed limit on 9th Avenue South would remain at 40 kph (25 mph), and parking along this street would be restricted on one or both sides.

During construction, access would be maintained to all businesses and residences along 9th and 10th avenues. However, because of the location of the construction activities and temporary detour routes, it is likely that the access routes to certain businesses and residences would be altered during the construction phase. Because both 9th and 10th avenues would become one-way only between 2nd and 20th streets, it may be necessary for people wanting to access the area (e.g., employees, business patrons and residents) to "back track" a block or two to reach their destination. While this may be an inconvenience for these people, it would not be considered an adverse effect since it would be temporary in nature.

9th Avenue South Traffic During Construction. Ninth Avenue South is a residential street with one travel lane in each direction. Along 9th Avenue South between 10th and 14th

---

[8] Other nearby east-west streets were considered for this detour, but they were considered to be inadequate because they are not through-streets for the length of the project (e.g., 11th and 12th Avenues) or are too far away from 10th Avenue South (e.g., 13th Avenue South) to provide for an effective detour.



Source: Great Falls City - County Planning Board, 1994

Figure 9

Truck Routes During Construction

Great Falls, 10th Avenue South Environmental Assessment

Montana Department of Transportation
F 60-2(25)93, CN 1311

streets, the ADT was estimated to average approximately 1,600 in 1992 (GFCCPB, 1992). Assuming a 1.2 percent average annual increase, the ADT on 9th Avenue in 1995 is estimated to have been approximately 1,660 and in 1998 (the first construction year), it is projected to be approximately 1,720.

During construction, the traffic along 9th Avenue South would increase by approximately ten times over normal (assuming that half of the non-truck traffic from 10th Avenue South is diverted onto 9th Avenue South).[9] Because of this, there could be reduced safety along this street for normal residential activities (e.g., crossing mid-block or playing ball games near the street, etc.). Therefore, MDT would place temporary traffic controls (such as signals and stop signs) at the cross streets. In addition, the posted speed limit would remain at 40 kph (25 mph). These measures would provide safety for motor vehicles, bicyclists and pedestrians crossing 9th Avenue South. Also, residents and property owners along 9th Avenue South would be notified, to heighten their awareness, of the temporary changes in the traffic conditions to take place during the construction period.

Alternative Transportation Modes (Public Transit Service, and Bicycle and Pedestrian Facilities)

Public Transit Service. Great Falls Transit District Bus Routes 1 and 8 could be affected during construction of the proposed road improvements; it may be necessary to detour the busses around the construction zones. This could also involve temporarily relocating bus stops. MDT and its contractor(s) would need to coordinate with the Great Falls Transit District to minimize the effects on public transit.

Bicycle/Pedestrian Facilities. Bicycle and pedestrian access to 9th Avenue South and 10th Avenue South would continue essentially as under existing conditions with the exception that they would be routed around the construction zones.

Air Quality

Construction activities would generate dust (especially during the grading activities) and exhaust emissions (from motorized construction equipment). As a standard practice, areas of loose dirt are periodically watered down to control the dust. Also, all motorized equipment must meet US EPA emission standards. Therefore, no adverse air quality effects are expected to occur.

---

[9] This is based on an estimate of the one-way ADT on 10th Avenue South in 1998 being approximately 17,000; and the two-way ADT on 9th Avenue South in 1998 being approximately 1,720.

Noise

Construction activities would generate additional noise in the vicinity of 10th Avenue South. The levels of noise would depend on the types of equipment and activities. However, because the increased noise would be temporary, and construction would be conducted in accordance with standard FHWA noise abatement practices and the City of Great Falls Noise Ordinance, the increase in noise would not be considered an adverse effect on the businesses and residences along 10th Avenue South. The City's noise ordinance requires that construction be limited to the daytime hours of 7:00 AM to 8:00 PM (City of Great Falls, 1988).

During construction, 9th Avenue South would be used as a detour for west-bound, non-truck traffic. (Trucks would be routed onto alternative streets that are already designated for truck traffic.) It is estimated that the number of vehicles traveling on 9th Avenue South between 2nd and 20th streets could increase by approximately ten times during the construction period. Thus, noise levels on 9th Avenue South could noticeably increase in the outdoor areas along this street. However, because the increase in noise would be limited to the construction periods, it would not be considered to be an adverse effect.

Construction Mitigation Measures

Hazardous Materials (HM).

HM-2. Prior to construction, MDT will ensure that the contractor or City of Great Falls prepares a sampling and analysis plan (SAP) to document provisions for cleaning up areas of contamination encountered during construction, such as, the frequency and methods of sample collection, the types of analyses to be performed on the samples, etc.

HM-3. Prior to construction, MDT will ensure that the contractor or City of Great Falls prepare a health and safety plan (HSP) to guide worker safety during construction in areas where contamination is encountered, such as, methods of monitoring air in confined spaces (such as utility trenches), determining levels of contaminants in those spaces which would trigger the requirement for workers to wear protective respirators, and maintaining adequate personal protective equipment on-site.

HM-4. The person evaluating the extent of contamination during construction will have completed a 40-hour training course in this field. MDT will assist the City in accomplishing this task.

HM-5. Contaminated soil which is excavated and not used as backfill will be hauled to a licensed commercial landfarm for disposal.

HM-6. The contractor(s) will be required to prevent the spilling or dumping of petroleum products or other polluting or toxic agents.

Erosion Control (EC).

EC-1. All work shall be conducted in accordance with the Clean Water Act, as amended (**33 USC 1251 et seq.**).

EC-2. An ECP will be submitted to DEQ's Permitting and Compliance Division in compliance with DEQ's Montana Pollutant Discharge Elimination System Regulations (**ARM 16.20.1314)** for this proposed project. Best Management Practices (BMPs) will be included in the design of the ECP using guidelines established in MDT's Highway Construction Standard Erosion Control Workplan.

EC-3. In accordance with **Sections 7-22-2152 and 60-2-208 M.C.A.**, MDT will re-establish a permanent desirable vegetation community along all areas that are disturbed by the proposed construction. A set of revegetation specifications will be developed by MDT that must be followed by the contractor. These specifications include instructions on seeding methods, seeding dates, types and amounts of mulch and fertilizer, and seed mix components. Seed mixes will include a variety of species to assure that areas disturbed by construction will be immediately stabilized by vegetative cover. The Seeding Special Provisions developed for this project will be forwarded to the Cascade County Weed Board for approval.

Wetlands (WE).

WE-1. MDT will specify that the contractor keep all construction activity and equipment out of the wetlands, and implement the soil erosion control measures identified in the ECP.

Cultural Resources (CR).

CR-1. Should archaeological resources be encountered during project construction, work will cease in the vicinity of the find, and the FHWA and SHPO will be notified. Construction will only resume when any recommended salvage and/or other mitigation measures have been completed and approved by the SHPO.

Socioeconomics (SE).

SE-1. MDT will notify the City of Great Falls Police and Fire departments, the Cascade Sheriff Department and the Montana Highway Patrol about the proposed reconstruction and the traffic control plan to ensure that emergency access and response times are maintained during the construction periods.

SE-2. MDT will notify the public about the proposed reconstruction of 10th Avenue South and the associated traffic control plan.

SE-3. Where necessary, the traffic control plan will include signs to identify temporary access changes for affected businesses along 10th Avenue South.

Traffic/Transportation (TT).

TT-1. During construction, MDT will place temporary traffic controls (e.g., signals and stop signs) at the intersections along 9th Avenue South affected by the detoured 10th Avenue South traffic.

TT-2. Prior to construction, property owners along 9th Avenue South, as well as the general public, will be notified about the proposed project and related traffic detours.

TT-3. As needed, MDT or its contractor will coordinate with the Great Falls Transit District to minimize effects on bus service along 10th Avenue South. If necessary, the Transit District will detour around the construction zones and temporarily relocate bus stops.

Air Quality (AQ).

AQ-1. Dust control measures, such as watering, will be used, as needed, during construction.

AQ-2. All construction equipment shall meet applicable US EPA emission standards.

Noise (NS).

NS-1. Businesses and residences near the construction activities will be notified prior to beginning the construction activities.

NS-2. Construction activities will be conducted in accordance with the City of Great Falls Noise Ordinance and standard construction noise abatement measures, whichever are more stringent.

NS-3. No construction shall be performed within 300 m (984 ft) of an occupied dwelling unit on Sundays, legal holidays and between the hours of 8 p.m. and 7 a.m. at night on other days.

NS-4. No pile driving or blasting operations shall be performed within 900 m (2,973 ft) of an occupied dwelling unit on Sundays, legal holidays and between the hours of 8:00 p.m. and 7:00 a.m. at night on other days.

NS-5. All equipment used shall have sound control devices no less effective than those provided on the original equipment. All mechanical equipment shall have muffled exhaust systems.

NS-6. All equipment shall comply with pertinent equipment noise standards of the US EPA.

NS-7. Should a specific noise impact complaint occur during construction, one or more of the following noise mitigation measures may be required at the contractor's expense.

- Locate the stationary construction equipment as far from nearby noise sensitive properties as possible.
- Shut off idling equipment.
- Reschedule construction operations to avoid periods of noise annoyance identified in complaint.
- Install temporary or portable acoustic barriers around stationary construction noise sources, if possible.
- Operate electric-powered equipment using line voltage power, if possible.
- Re-notify nearby residences whenever extremely noisy work will be occurring.

4.14 SECTION 4(F) AND SECTION 6(F) RESOURCES

According to the Montana Department of Fish, Wildlife, and Parks (MDFWP), there are no properties in the project corridor that meet the definition in Section 4(f) of the US Department of Transportation Act (**49 USC 303** and **23 USC 138**). Nor are there any properties that were purchased and/or administered for recreational purposes under Section 6(f) the National Land and Water Conservation Fund Act (**16 USC 460**). Therefore, none of the property to be acquired is a "Section 4(f)" or "Section 6(f)" property.

4.15 FARMLAND PROTECTION ACT

The project corridor is in an area committed to urban development. As such, the Farmland Protection Policy Act (**7 USC 4201 et seq.**) does not apply.

4.16 ENVIRONMENTAL JUSTICE AND *TITLE VI OF THE CIVIL RIGHTS ACT*

On February 11, 1994, President Clinton issued an Executive Order (#12898), in accordance with *Title VI of the Civil Rights Act of 1964*, directing all federal department and agency heads to take appropriate and necessary steps to ensure that all programs or activities receiving federal financial assistance that affect human health or the environment do not directly, or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin.

In accordance with this Executive Order, each federal action must be evaluated to identify and address, "...disproportionately high and adverse human health or environmental effects on minority or low-income populations." The Council on Environmental Quality (CEQ) has developed draft guidance for addressing Environmental Justice (CEQ, 1996):

> *"When determining whether environmental effects are disproportionately high or adverse, agencies are to consider the following three factors to the extent practicable:*
>
> *(a) Whether there is or will be an impact on the natural or physical environment that significantly (as employed by NEPA) and adversely affects a minority or low-income population; and*
>
> *(b) Whether environmental effects are significant (as employed by NEPA) and are or may be having an adverse impact on minority populations or low-income populations that appreciably exceeds or is likely to appreciably exceed those on the general population or other appropriate comparison group; and*
>
> *(c) Whether the environmental effects occur or would occur in a minority population or low-income population affected by cumulative or multiple adverse exposures from environmental hazards.*

These factors are considered below.

In the long-term, the Reconstruction Alternative is expected to have a beneficial economic effect on businesses along 10th Avenue South. It would not result in the dislocation of any businesses or residents. Nor would it have an "adverse effect" on the growth of population, housing or jobs in Great Falls.

During the construction periods (two summers) there would be some short-term effects on businesses and residents on 10th Avenue South and 9th Avenue South (see "Socioeconomics" discussion in Section 4.13.2). While the additional traffic and noise along 9th Avenue South and the inconveniences to drivers along 10th Avenue South could be perceived as "adverse," they would be temporary in nature.

As shown in Table 3 in Section 3.9, the neighborhoods north of the project segment of 10th Avenue South have blocks where relatively high percentages (15.0 to 50.0 percent) of low-income families reside. These are higher, and in some blocks much higher, than the urban area average of 10.8 percent. Assuming some low-income families live on 9th Avenue South, they could be affected by the additional traffic and noise from westbound traffic that would be detoured from 10th Avenue South onto 9th Avenue South during the construction periods. However, these effects are considered minor and/or temporary.

Table 3 also shows that the neighborhoods north of 10th Avenue South are predominately "white." However, the percentage of minority residents to total residents ranges from 15.0 to 33.5 percent, which is higher than the urban area average of approximately 7.4 percent. Assuming some minority individuals live on 9th Avenue South, they could be affected by the additional traffic and noise from westbound traffic that would be detoured from 10th Avenue South onto 9th Avenue South during the construction phase. However, these effects are considered minor and/or temporary.

As discussed in Section 4.4 below, no other projects of a similar nature or with similar effects are projected to occur in the reasonably foreseeable future. Thus, low-income and minority populations would not be exposed to multiple or cumulative effects. In conclusion, none of the factors noted in the Executive Order would occur as discussed below.

(a) While minority or low-income populations could be affected by the project, the effects would not be "adverse."

(b) No minority or low-income populations would be "adversely" affected more than the population of the urban area as a whole.

(c) No minority or low-income populations would be affected by cumulative or multiple adverse exposures from environmental hazards, because no similar types of projects are projected to occur in the foreseeable future or within the same construction period as the Reconstruction Alternative.

4.17 CUMULATIVE EFFECTS

Other road or infrastructure improvement projects or land development projects that would occur in the vicinity of the proposed project and/or during the reasonably foreseeable future would add cumulatively to the construction impacts described above in Section 4.13.2.

According to the GFCCPB staff, there are no City-sponsored infrastructure improvements or major land development projects scheduled to occur in the vicinity of the 10th Avenue South project during the reasonably foreseeable future (Rangel, pers. comm., 1996). MDT staff identified one project that would occur in conjunction with, or immediately after, the proposed project. This MDT project (F 60-2(45)90, Control No. 3108) would upgrade seven existing traffic signals on 10th Avenue South between 23rd Street and 49th Street. (These upgrades would make these signals compatible with the proposed signal upgrades associated with the proposed project between 2nd and 20th streets.) This project would result in relatively minor construction impacts that would be mitigated with proper signing and flagging. No major interruptions of traffic flow on 10th Avenue South or intersecting streets are anticipated. Therefore, the possible cumulative effects of the proposed project in combination with this MDT signal project are not expected to be adverse.

In the long-term, the increased capacity of the highway would add cumulatively to the available east-west circulation system capacity in Great Falls. This is expected to result in an overall improvement to traffic flow and air quality in the City region.

4.18 SECONDARY EFFECTS

Secondary effects are those that occur indirectly as a result of project implementation. The Reconstruction Alternative is expected to result in improved capacity for motor vehicle travel on 10th Avenue South. As a result, businesses along 10th Avenue could experience an economic benefit.

Another secondary benefit would be that City of Great Falls water mains, which are currently located down the middle of the highway, would be moved by the City to either side of the highway during highway reconstruction. This would improve access to the water mains and reduce traffic disruption during future maintenance of these water lines. Also, the City would place additional storm drains and inlets along 10th Avenue South in areas that are currently in need of additional storm drainage facilities. This would relieve localized flooding that occurs during heavy rainstorms, and also relieve any related traffic problems.

The addition of two more travel lanes could increase the perception that pedestrian and bicycle crossings of the highway should be done at the intersection crosswalks, and thus could indirectly reduce "jay-walking."

4.19 COMPLIANCE AND PERMIT REQUIRED

The proposed project will be completed in compliance with the provisions of both Water Quality under **75-5-401(2) M.C.A.** for Section 3(a) authorizations, and Stream Protection under **87-5-501 through 509 M.C.A.**, inclusive. Also, all work will be completed in accordance with the federal Water Quality Act of 1987 (**P.L. 100-4**), as amended.

Prior to any relevant disturbance, the proposed project will require the following permit under the federal Clean Water Act (**33 USC 1251-1376**): a Montana Discharge Elimination System Permit from DEQ's Permitting and Compliance Division.

5. COMMENTS AND COORDINATION

Coordination with the public was initiated by MDT on September 29, 1988, when MDT distributed a letter of intent to federal, state and local agencies and affected private parties. The letter described the proposed project and requested comments which would be relevant to the project and EA. In addition, during the course of preparing the EA, MDT and its consultant contacted a number of federal, state and local agencies and private parties directly.

A public information meeting was held in January 1990 to present information on the project and solicit input from the public. Approximately 70 people attended this meeting. At the public meeting, a number of individual concerns and ideas were expressed and discussed. In general, those that attended the meeting and hearing were in favor of the general concept of improving and widening 10th Avenue South. Two individuals expressed concerns about the addition of two more travel lanes due to the cost, and because of the additional time pedestrians would need to cross the six-lane versus four-lane highway. There was also discussion about the construction phasing and detour routes, location of driveways, storm drainage problems, and road improvements needed on certain cross streets. These issues were taken into consideration during the subsequent design phases.

A formal location and design hearing was held on April 23, 1991. At the time of this hearing, an earlier version of this EA (dated June 1990) was available for review, and the public was encouraged to comment on the EA as well. A summary of this hearing is included in Appendix A.

Most comments indicated varying degrees of approval of the project, from no opinion, only requests to provide some detail, to strong support for the project and other road improvements. Three individuals opposed the concept of a six-lane highway, and two individuals objected to the potential affect on their property. There were specific concerns about the location of approaches, parking impacts, additional paving, right- and left-turn lanes, and signal-controlled arrows. One person requested that the project be extended to 26th Street, and eliminate left turns at 10th and 12th streets. Several people asked that the speed limits be more strictly enforced. One letter was in support of the project but identified a major drainage problem at the east end of the project and requested additional storm drains be incorporated into the design. Three or four individuals opposed the detouring of traffic onto 9th Avenue South during construction due to the additional traffic, noise and air pollution and because the street is primarily a residential street.

Since 1991, MDT has further refined the engineering design for the proposed reconstruction project. In addition, MDT has coordinated with the City of Great Falls and other affected property owners about the relocation of driveways, the relocation and upgrading of utilities, and concerns related to property acquisition.

In 1994, MDT coordinated with the Montana Department of Health and Environmental Sciences (DHES) about the potential for encountering petroleum-contaminated soil during the reconstruction project. In November 1994, MDT held a public information meeting for all affected property and business owners to get into compliance with underground storage tank (UST) regulations, and to encourage business owners to upgrade their tanks before the highway is constructed. All property and business owners along the project corridor, as well as the Great Falls Fire Marshall and the Cascade County Sanitarian were invited to the meeting.

In May 1995, MDT had a subsurface investigation of MDT right-of-way prepared to evaluate the level and location of soil contamination (primarily from former or existing service stations) and the potential effect this contamination could have on planned upgrading of the utilities under 10th Avenue South. During the preliminary design phase, MDT has continued to coordinate with the adjacent affected property owners and DEQ to evaluate the options for excavating the contaminated soil. In addition, MDT has continued to coordinate with property owners, as needed regarding right-of-way concerns.

In accordance with state and federal regulations for public involvement (**ARM 18.2.240** and **23 CFR 771.111**, respectively), this EA will be made available for review by the public and responsible agencies. Also a public meeting for the project will be held during the EA public review period. All written and verbal comments received at the public meeting, and all written comments received during the EA comment period will be reviewed. Responses will be prepared for all substantive comments received. If necessary, the EA will be revised to incorporate these comments. The revised EA, public meeting record, comments, and responses to comments will be used by FHWA to determine whether any significant impacts would result from the proposed project.

6. LIST OF EA PREPARERS, AGENCY CONTACTS, AND AUTHORIZATIONS REQUIRED

6.1 LIST OF EA PREPARERS

The following individuals participated in preparation of this EA.

Dale Paulson, FHWA; Helena, Montana
Joel Marshik, MDT; Helena, Montana

6.2 LIST OF INDIVIDUALS AND AGENCIES CONTACTED AND THAT CONTRIBUTED INFORMATION TO THE EA

The following individuals/agencies were contacted during preparation of this EA, and provided information used in this EA.

Montana Department of Commerce
Patricia Roberts

Montana Department of Fish, Wildlife, and Parks
Gretchen Olheiser

Montana Natural Heritage Program
John Hinshaw

Montana State Historic Preservation Office
Katherine Huppe

City of Great Falls
Jim Pierce

Great Falls City-County Planning Board
Andrew Finch
Benjamin Rangel

US Department of the Army, Corps of Engineers
Jean Ramer

US Department of the Interior, Fish and Wildlife Service
Rob Hazelwood
Dale Harms

6.3 LIST OF AGENCIES WITH OVERLAPPING OR ADDITIONAL JURISDICTION, AND PERMITS AND AUTHORIZATIONS REQUIRED

The following permits or approvals will need to be obtained prior to construction of the project.

Responsible Agency	Permit or Approval Needed
Montana DEQ	Section 402/Montana Pollution Discharge Elimination System
Montana DEQ	Contaminated Soil Disposal Plan
Montana DEQ	Health and Safety Plan
Cascade County Weed Board	Revegetation Plan (seeding provisions)
City of Great Falls	Construction permits/easements

In addition, MDT and its contractor(s) will need to coordinate closely with the City of Great Falls, which owns the water mains, sewer lines and storm drainage facilities; US West, which owns the phone lines; Montana Power, which owns the power lines and poles; and Great Falls Gas Company which owns the natural gas lines.

7. REFERENCES CITED

Architectural and Transportation Barriers Compliance Board (ATBCB). 1991 (July). *Americans with Disabilities Act (ADA) Accessibility Guidelines.*

Federal Highway Administration (FHWA). 1995 (June). *Highway Traffic Noise Analysis and Abatement, Policy and Guidance.* FHWA-RD-77-108. Prepared by T.M. Barry and J.A. Reagan.

Finch, Andrew. Transportation Planner, Great Falls City-County Planning Board. Personal communication. July 22, 1996.

GCM Services, Inc. 1989 (Sept.). *Cultural Resource Inventory and Assessment, 10th Avenue South, Great Falls, F 60-2(25)93.*

Great Falls, City of. 1988 (Oct.). Building Code. Chapter 8.56, Noise.

Great Falls City-County Planning Board (GFCCPB). 1981 (April). *Great Falls Area Comprehensive Plan.*

_______. 1990a (Jan.) *1985 Transportation Plan Update, Task V. Formulate/Evaluate Transportation Plan Alternatives.* Great Falls Urban Transportation Planning Process.

_______. 1990b (Sept.) *1990-2010 Transportation Plan Update--Summary Report.* Great Falls Urban Transportation Planning Process.

_______. 1991 (Aug.). *Great Falls Central Place Revitilization Plan.*

_______. 1992. 1992 Traffic Volumes for 9th Avenue South.

_______. 1993 (Aug.) 1990 Census Data on Minority and Low Income Populations in Great Falls Urban Transportation Study Area.

_______. 1994 (Oct.) *1994 Routine Review Report* (Based upon 1993 Data/Information). Great Falls Urban Transportation Planning Process.

_______. 1995. 1994 Great Falls Hazardous Intersection Identification Data.

_______. 1996 (May). *An Addendum to the Summary Report of the 1990-2010 Transportation Plan.* Including Appendices. Great Falls Urban Transportation Planning Process.

_______. Undated. *South Arterial and Great Falls to Billings Highway.* Technical Paper.

Hazelwood, Rob. US Department of the Interior, Fish and Wildlife Service. Personal communication. August 27, 1996.

HKM Associates, Inc. 1980. *Environmental Impact Statement/4(f) Evaluation - Route Location Study; Great Falls South Arterial Project, Great Falls, Montana.*

Martel, Deena L., Assistant General Manager, Great Falls Transit District. Personal communication. July 11, 1996.

Mountain West Research-North, Inc. 1985 (Sept.). *Population, Employment, Dwelling Unit, Vehicle, and Student Enrollment Forecasts for the Great Falls Transportation Study Area, 1980-2010.* Prepared for the Great Falls City-County Planning Board and Montana Department of Highways.

Maxim Technologies, Inc. (Maxim). 1995 (Sept.). *10th Avenue South Preconstruction Investigation, 20th Street to Warden Bridge, Great Falls, Montana*; Task Order No. 118, F60-2(25)93, Control No. 1311.

Montana Department of Commerce (MDOC). 1995 (Oct. 5). Memorandum from Patricia Roberts to Population Data Users, Re: 1992 and 1994 Revised Population Estimates for Counties, 1992 Revised Population Estimates for Incorporated Places, and 1994 Population Estimates for Incorporated Places.

Montana Department of Fish, Wildlife and Parks (MDFWP). 1989 (March 27). Correspondence from Gretchen Olheiser, Chief, Operations Bureau, Parks Division, MDFWP, to Stephen C. Kologi, P.E., Chief, Preconstruction Bureau, Montana Department of Highways.

Montana Department of Transportation (MDT). 1990a (May 23). Memorandum from Edrie L. Vinson, Supervisor, Environmental Section, MDH, to Robert R. Newhouse, P.E., Consultant Design Engineer, Consultant Design Section, MDH.

_______. 1990b (Oct. 22). Correspondence from Edrie L. Vinson, Supervisor, Environmental Section, MDH, to Marcella Sherfy, Montana State Historic Preservation Office, Montana Historical Society.

_______. 1992a (June). *Biological Evaluation, Tenth Avenue South.*

_______. 1992b (Jan. 7). Correspondence from Edrie L. Vinson, Chief, Environmental and Hazardous Waste Bureau, Montana Department of Highways, to Jeff Herbert, State Water Fowl Coordinator, Montana Department of Fish, Wildlife and Parks.

_______. 1992c (Jan. 7). *Wetland Inventory and Assessment, 10th Avenue South, Great Falls, F 60-2(23)90.*

_______. 1994 (April). *Montana Road Design Manual.*

_______. 1995a. *Montana Historical and Architectural Inventory, Site No. 24CA616.*

_______. 1995b (Aug. 9). Memorandum from Cora G. Helm, Hazardous Waste Section, MDT, to Karl M. Helvik, P.E., Supervisor, Environmental Engineering Section, MDT.

_______. 1996a (Jan. 18). Correspondence from Jon Axline, Historian, Environmental Services, MDT, to Paul Putz, Montana State Historic Preservation Office, Montana Historical Society.

_______. 1996b (April). *Montana Department of Transportation, Traffic Noise Analysis and Abatement: Policy and Guidance.*

Montana Natural Heritage Program (MNHP). 1995 (March 25). Correspondence from John Hinshaw, Environmental Information Specialist, to Joel M. Marshik, Montana Department of Transportation.

Pierce, Jim, Stormwater Engineer, City of Great Falls. Personal communication. July 10, 1996.

Rangel, Benjamin M., Senior Planner, Great Falls City-County Planning Board. Personal communication. July 11, 1996.

State Historic Preservation Office (SHPO). 1989 (Nov. 11). Correspondence from Katherine M. Huppe, Historical Survey Reviewer, SHPO, to Mitzi Rossilon, Archaeologist, Montana Department of Highways.

_______. 1990 (October 31). SHPO concurrence on Cultural Site 24CA303.

_______. 1996 (Feb. 5). SHPO concurrence on Cultural Site 24CA616.

Transportation Research Board. 1994. *Highway Capacity Manual, Special Report 209.*

US Bureau of the Census. 1980 Census Data for Great Falls, Montana.

_______. 1990 Census Data for Great Falls, Montana.

US Department of Interior, Fish and Wildlife Service (USFWS). 1991 (June 18). Correspondence from Dale Harms, State Supervisor, Montana State Office, USFWS, to Jack R. Fisher, P.E., Thomas, Dean and Hoskins, Inc.

US Department of Transportation, Federal Highway Administration (FHWA). 1997 (Jan. 15). Correspondence from Louis F. Marz, Jr., Federal Transportation Agency (FTA) and Janice W. Brown, FHWA Division Administrator, Montana Division to Ross Tervo, Supervisor, Urban Transportation Planning, MDT.

APPENDICES

A. Summary of April 23, 1991 Location and Design Hearing

B. Agency Correspondence

C. Biological Assessment

D. Noise Assessments

APPENDIX A

Summary of April 23, 1991 Location and Design Hearing

SUMMARY OF THE OPEN FORM
LOCATION AND DESIGN PUBLIC HEARING

File # 428

F 60-2(25)
10th Avenue South (6-Lane)

This report is the "Transcript" of the formal Location and Design Public Hearing held in the Multi-Purpose Room of the Great Falls Vocational Technical Center in Great Falls on April 23, 1991. The project proposes to widen 10th Avenue South to six lanes with a turn lane and sidewalks. The basic existing right-of-way will allow construction of a 15-foot median/turn bay, a 12-foot lane in each direction next to the median, then two 11.2-foot lanes each way, curb, gutter and a 4.5-foot sidewalk on each side. Concrete pavement is proposed from 18th Street to the Warden Bridge. Some additional right-of-way will be needed at corners approaching on 9th Street and for some light standards.

The format was "Open Form" in which neither a formal right-of-way (R/W) nor engineering presentation was made. A packet was handed out to each participant containing a cover letter from the Director, an outline of the project proposal, a sketch of the project location, typical section, the R/W and relocation programs, a list of the environmental concerns, reduced copies of the display boards and two pamphlets; one on funding and the other with typical R/W questions.

Seventy-two (72) people attended the meeting through the hearing time from 11:00 a.m. to 7:00 p.m. They were greeted at the door, advised of the format and escorted to the display boards. Their general concerns were identified and then discussed with an engineer or the R/W representative. Their concerns, questions and opinions, either opposing or in favor of the project, were solicited. Options to submit their input were to write in using a form supplied in the packet, their own letter, or verbally by an interview at a recording station. Ten statements and letters were turned in during the meeting and six were sent in during the comment period. No one elected to give oral testimony. Copies of the statements are attached.

The following is a recap of the opinions and concerns:

Most of the input indicated varying degrees of approval from no opinion, only requests to provide some detail, to strong support for the job and other road improvements. Three specifically opposed the concept of six lanes and two of these proposed using money and/or effort to build the south bypass. Two specifically objected to the six lane design affecting their property.

Specific concerns or requests included location of approaches, additional paving, right and left turn lanes and signal controlled arrows. One request was for the six lane to be extended east to 26th Street, eliminate left turns at 10th and 12th Street and several asked that the speed limits be strictly enforced. One letter explained a major drainage problem at the east end of the project and requested additional storm drains. He was in favor of the project. Two opposed using 9th Avenue as a detour.

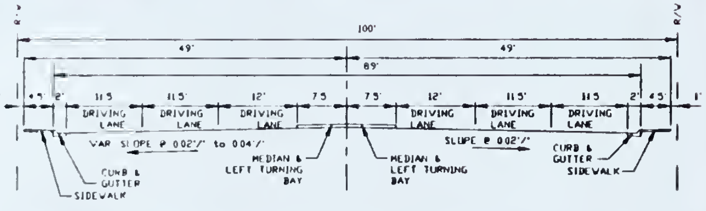
Most of the subjects discussed during the meeting period addressed specific properties involved in the construction. Three or four individuals discussed the affect and opposed the 9th Avenue detour.

Daniel P. Bartsch

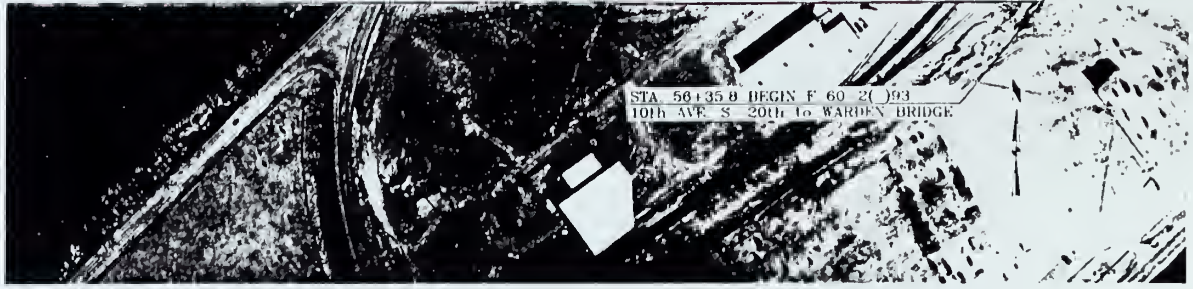
Daniel P. Bartsch, Information Officer
Public Affairs Bureau

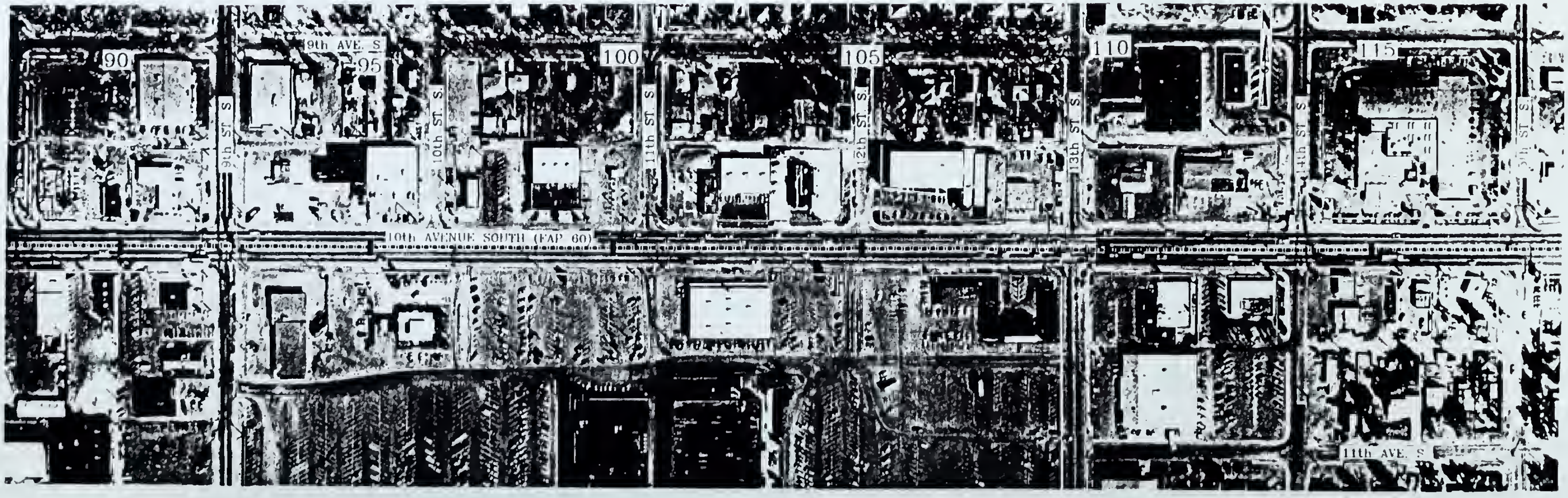
DPB:D:PAF:2.cm

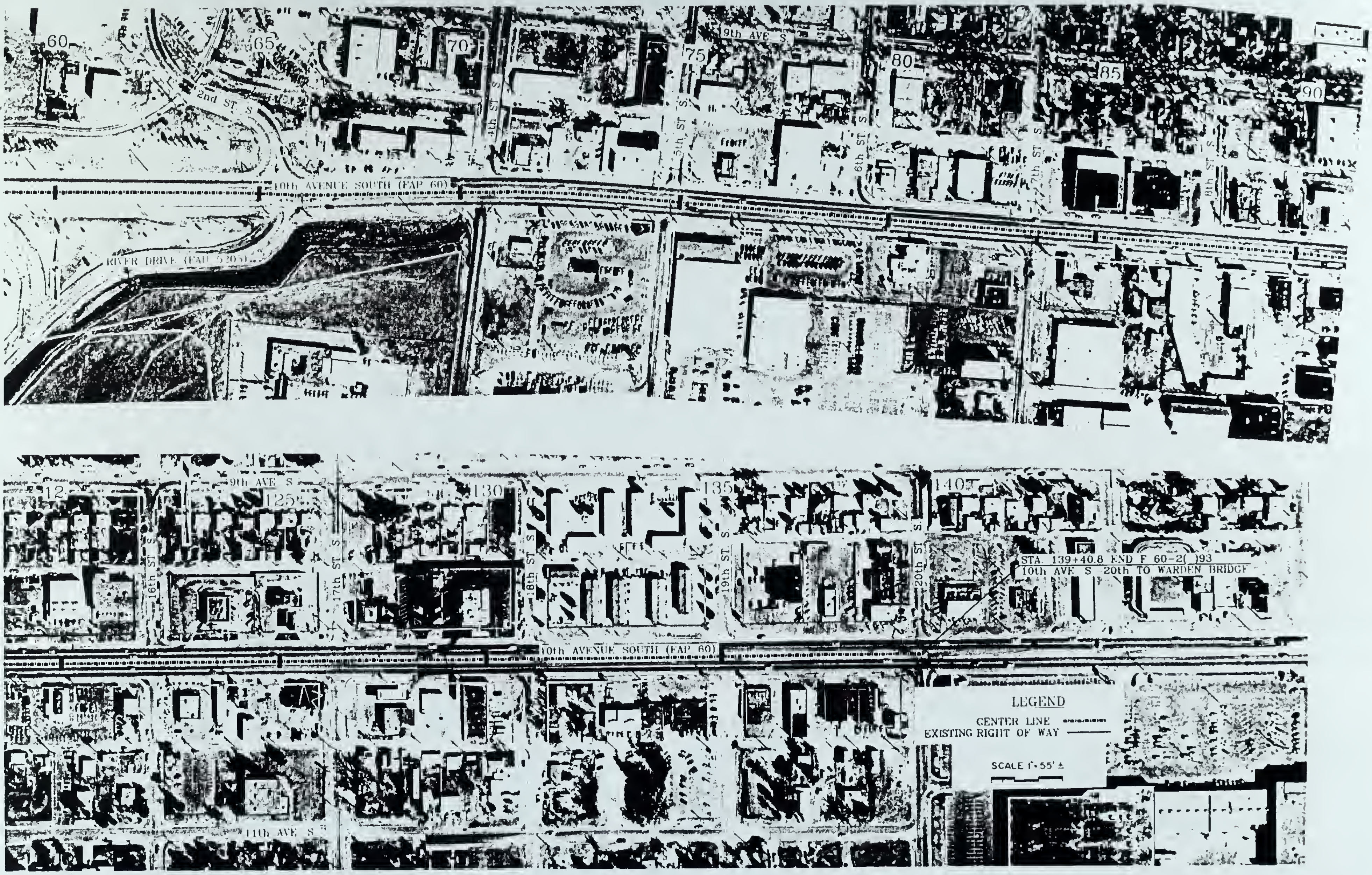
F 60-2 ( ) 93
10TH AVENUE SOUTH
20th STREET to WARDEN BRIDGE
CASCADE COUNTY
1.57 MILES



TYPICAL SECTION


STA. 56+35.8 BEGIN F 60 2( )93
10th AVE. S. 20th to WARDEN BRIDGE




60
65
70
75
80
85
90
2nd ST S
4th ST S
5th ST S
6th ST S
7th ST S
8th ST S
9th AVE S
10th AVENUE SOUTH (FAP 60)
RIVER DRIVE (FAU 5205)
12
125
130
135
140
9th AVE S
16th ST S
17th ST S
18th ST S
19th ST S
20th ST S
STA 139+40.8 END F 60-2( )93
10th AVE S -20th TO WARDEN BRIDGE
10th AVENUE SOUTH (FAP 60)
11th AVE S
LEGEND
CENTER LINE
EXISTING RIGHT OF WAY
SCALE 1"=55' ±

APPENDIX B

Agency Correspondence

MONTANA NATURAL HERITAGE PROGRAM
1515 East Sixth Avenue
P.O. Box 201800
Helena, Montana 59620-1800
(406) 444-3009

MAST[illegible] FILE
C[illegible]PY

MASTER FILE
COPY

MAR [illegible] 1995

March 28, 1995

Joel M. Marshik
MT Department of Transportation
2701 Prospect Avenue
P.O. Box 201001
Helena, Montana 59620-1001

Dear Joel:

This is in response to your requests of March 17, 1995, for information on sensitive species and plant communities in the project areas outlined below. I have found 9 element occurrence records for the general areas described. I have enclosed a map of the areas in your requests which I hope will be helpful. We have developed a program that will create these maps and we hope to be using this program more in the future. I used our township coverage for this search(which are the black squares) but we will have a section coverage in about 6 months. Since we process a lot of requests from your offices we would appreciate any comments you might have on the maps design and helpfulness.

Control #'s	Pg#	# of EOs
Control No. 2426 and 2473	1-2	2
Control No. 0857	1	1
Control No. 1311 F60-2(25)93 F	1-5	9
Control No. 2171		0
Control No. 2314	1	1

Please note that this report and accompanying map include data intended for use within your firm and not for general distribution or publication. In particular, public release of specific location information may jeopardize the welfare of a threatened, endangered, or sensitive (TES) species or community. Specific locations of federally-listed threatened or endangered species should be requested directly through the U.S. Fish and Wildlife Service Office. Also, in the interest of protecting

The Nature Conservancy and Montana State Library

landowner privacy, precise location information has not been included in this report for TES species located on most privately-owned lands.

Please remember that the results of a data search by the Montana Natural Heritage Program are not intended as a final statement on sensitive species within a given area, or as a substitute for on-site surveys needed for environmental assessments.

I hope this information is helpful to you. If you have questions on any of these sites or species, please call.

Sincerely,

John Hinshaw

John Hinshaw
Environmental Information Specialist

March 28, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: PSILOCARPHUS BREVISSIMUS
Common Name: DWARF WOOLLY-HEADS

Global rank: G5 Forest Service status:
State rank: S1 Federal Status:

Element occurrence code: PDAST7R010.001
Element occurrence type:

Survey site name: SAND COULEE
EO rank:
EO rank comments:

County: CASCADE

USGS quadrangle: SOUTHEAST GREAT FALLS

Township:	Range:	Section:	TRS comments:
020N	004E	25	

Precision: G
Survey date: Elevation: 3360 -
First observation: 1891 Slope/aspect:
Last observation: 1891-08-13 Size (acres): 0

Location:
LOWER SAND COULEE (HISTORICAL COLLECTION, GENERAL LABEL INFORMATION.)

Element occurrence data:
UNKNOWN.

General site description:
SPECIES OCCURS IN DRYING VERNAL POOLS.

Land owner/manager:
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:
RECORD OBTAINED FROM MRPP FILE, MONTU. LABELED EVAX PROLIFERA; ANNOTATED BY R. DORN, 1975.

Information source: BOTANIST, MONTANA NATURAL HERITAGE PROGRAM, 1515 EAST SIXTH AVENUE, HELENA, MT 59620-1800.

Specimens: WILLIAMS, R.S. (784). 1891. SPECIMEN #1085 MT.

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CENTUNCULUS MINIMUS
Common Name: CHAFFWEED

Global rank: G5   Forest Service status:
State rank: S1   Federal Status:

Element occurrence code: PDPRI01020.001
Element occurrence type:

Survey site name: GREAT FALLS
EO rank:
EO rank comments:

County: CASCADE

USGS quadrangle: SOUTHEAST GREAT FALLS
SOUTHWEST GREAT FALLS

Township:	Range:	Section:	TRS comments:
020N	004E	32	

Precision: G
Survey date: 1891-08-11   Elevation: 3340 -
First observation: 1891   Slope/aspect:
Last observation: 1891-09-10   Size (acres): 0

Location:
GREAT FALLS (HISTORICAL COLLECTION, GENERAL LOCATION INFO.); POSSIBLY OCCURS IN SAND COULEE CREEK DRAINAGE, OR NEAR MISSOURI RIVER.

Element occurrence data:
UNKNOWN.

General site description:
UNKNOWN; SPECIES OCCURS IN DRYING VERNAL PONDS AND SIMILAR HABITATS.

Land owner/manager:
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:

Information source: BOTANIST, MONTANA NATURAL HERITAGE PROGRAM, 1515 EAST SIXTH AVENUE, HELENA, MT 59620-1800.

Specimens: WILLIAMS, R. S. (693). 1891. SPECIMEN #4080 MONT.

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: BACOPA ROTUNDIFOLIA
Common Name: ROUNDLEAF WATER-HYSSOP

Global rank: G5 Forest Service status:
State rank: S1 Federal Status:

Element occurrence code: PDSCR06080.003
Element occurrence type:

Survey site name: GREAT FALLS
EO rank:
EO rank comments:

County: CASCADE

USGS quadrangle: SOUTHEAST GREAT FALLS
SOUTHWEST GREAT FALLS

Township:	Range:	Section:	TRS comments:
020N	004E	32	

Precision: G
Survey date: Elevation: 3340 -
First observation: 1891 Slope/aspect:
Last observation: 1891-09-08 Size (acres): 0

Location:
LOWER SAND COULEE (HISTORICAL RECORD).

Element occurrence data:
IN FRUIT (13 AUGUST 1891, 3 SEPTEMBER 1891)

General site description:
UNKNOWN. (SPECIES OCCURS ON POND AND STREAM EDGES.)

Land owner/manager:
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:
GENERAL LOCATION, RECORDS OBTAINED FROM MRPP CARDS.

Information source: BOTANIST, MONTANA NATURAL HERITAGE PROGRAM, 1515
EAST SIXTH AVENUE, HELENA, MT 59620-1800.

Specimens: WILLIAMS, R. S. (856). 1891. MONT.

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CAREX SYCHNOCEPHALA
Common Name: MANY-HEADED SEDGE

Global rank: G4 Forest Service status:
State rank: S1 Federal Status:

Element occurrence code: PMCYP03DE0.001
Element occurrence type:

Survey site name: GREAT FALLS
EO rank:
EO rank comments:

County: CASCADE

USGS quadrangle: SOUTHEAST GREAT FALLS
SOUTHWEST GREAT FALLS

Township:	Range:	Section:	TRS comments:
020N	004E	32	

Precision: G
Survey date: Elevation: 3340 -
First observation: 1890 Slope/aspect:
Last observation: 1891-09-08 Size (acres): 0

Location:
GREAT FALLS (HISTORICAL COLLECTION, GENERAL LABEL INFORMATION POSSIBLY OCCURS IN SAND COULEE CREEK DRAINAGE, OR NEAR MISSOURI RIVER.

Element occurrence data:
UNKNOWN.

General site description:
UNKNOWN; SPECIES OCCURS IN MOIST MEADOWS, LAKE SHORES, AND THICKETS AT LOW ELEVATIONS.

Land owner/manager:
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:
RECORD OBTAINED FROM MRPP FILE, MONTU.

Information source: BOTANIST, MONTANA NATURAL HERITAGE PROGRAM, 1515 EAST SIXTH AVENUE, HELENA, MT 59620-1800.

Specimens: WILLIAMS, R. S. (S.N.). 1890 AND 1891. MONT.

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: NAJAS GUADALUPENSIS
Common Name: GUADALUPE WATER-NYMPH

Global rank: G5 Forest Service status:
State rank: S1 Federal Status:

Element occurrence code: PMNAJ01050.002
Element occurrence type:

Survey site name: SAND COULEE
EO rank:
EO rank comments:

County: CASCADE

USGS quadrangle: SOUTHEAST GREAT FALLS

Township:	Range:	Section:	TRS comments:
020N	004E	25	

Precision: G
Survey date: Elevation: 3360 -
First observation: 1891 Slope/aspect:
Last observation: 1891-08-25 Size (acres): 0

Location:
LOWER SAND COULEE (HISTORICAL COLLECTION, GENERAL LABEL INFORMATION).

Element occurrence data:
UNKNOWN.

General site description:
POND.

Land owner/manager:
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:
RECORD OBTAINED FROM MRPP FILE, MONTU.

Information source: BOTANIST, MONTANA NATURAL HERITAGE PROGRAM, 1515 EAST SIXTH AVENUE, HELENA, MT 59620-1800.

Specimens: WILLIAMS, R. S. (858). 1891. SPECIMEN #15528. MONT.

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Fish and Wildlife Enhancement
301 South Park
P.O. Drawer 10023
Helena, Montana 59626
Federal Building, U.S. Courthouse

HOSKINS

IN REPLY REFER TO:

FWE-61130-Billings
M.17-FHWA Informal

June 18, 1991

Mr. Jack R. Fisher, P.E.
Thomas, Dean & Hoskins, Inc.
1200 Twenty-Fifth Street South
Great Falls, Montana 59405

JRF

Dear Mr. Fisher:

This responds to your June 11, 1991 letter concerning Montana Department of Highways Project F-60-2(25)93, Tenth Avenue South, 20th Street to Warden Bridge, Great Falls, Montana.

The threatened or endangered species which may occur in the project area include the bald eagle (Haliaeetus leucocephalus), peregrine falcon (Falco peregrinus), piping plover (Charadrius melodus), and least tern (Sterna antillarum). We are not aware of nesting territories or recent nesting of any of these species near enough to the project to be of concern. All four species probably occur, at times, as seasonal migrants and the bald eagle may occur as a winter resident. However, considering the nature of the project and the extensively-developed condition of the immediate project area, we do not expect any project-related impacts to threatened or endangered species.

We appreciate your efforts to consider endangered species in your project planning.

Sincerely,

Dale Harms
State Supervisor
Montana State Office

cc: Suboffice Coordinator, USFWS, Fish & Wildlife Enhancement (Billings, MT)

JGW/dc

"Take Pride in America"

State Historic Preservation Office
Montana Historical Society
Mailing Address: 225 North Roberts • Helena, MT 59620-9990
Office Address: 102 Broadway • Helena, MT • (406) 444-7715

RECEIVED
THOMAS, DEAN & HOSKINS
TTR-
NOV 1 7 1989

Hwy. Struct. Municipal
JRC
Job No.

Sent to Consultant
11-16-89
Bob [illegible]

November 11, 1989

Mitzi Rossillon, Archaeologist
Montana Department of Highways
2701 Prospect Avenue
Helena, MT 59620

Re: 10th Avenue South, Great Falls
F 60-2(25)93

Dear Mitzi:

Thank you for the opportunity to review the cultural resource report prepared by GCM Services for the project referenced above. Research for this report was very complete, allowing establishment of historic context and providing a good understanding of the development of the neighborhood along 10th Avenue South. Use of other available documentation to buttress tax records proved most helpful, and we certainly concur with Jon that no historic district remains along the route of this project. We also concur that neither the Trotsky House (24CA301) nor the Evans House (24CA302) can qualify individually for listing in the National Register. We do believe, however, that the Blossom Home (24CA303) can qualify individually as a good representative of a Craftsman style home (Criterion C). The fact that it was occupied by an ACM employee during the span of time that the neighborhood was characterized by single-family, blue collar residences does nothing to diminish its value. While we agree that the integrity of the neighborhood has been severely compromised, the house itself is set off from more recent commercial development by the hedge, the wonderful fence and the yard featuring fully mature shade trees. It is doubtlessly true that similiar houses exist in eligible districts in Great Falls. We do not believe, however, that the probable existence of other Craftsman homes in the city disqualifies the Blossom House from further consideration.

Sincerely,

Kathy Huppe

Katherine M. Huppe
Historical Survey Reviewer

cc: Cheryl Bruskotter

File: Comp/MDOH-10th Avenue South

Date Recd. Preconst. 11/15/89

Act	Info	MAIL ROUTE	Attach	Initial
	✓	30 Preconst Engr		
	✓	30 Assistant		
		30 Office Mgr		
		32 Road Design		
	✓	33 Environment		
		34 Hydraulics		
		35 Survey & Mapping		
		35 Traffic		
	✓	37 Consultant		
		[illegible]		

K. K. Newhouse

OCT 24 1990

DEPARTMENT OF HIGHWAYS

STAN STEPHENS, GOVERNOR
2701 PROSPECT AVE.
STATE OF MONTANA
HELENA, MONTANA 59620

RECEIVED
HOMAS, DEAN & HOSK
FEB 26 ~~1988~~ 1991

Hwy.	Struct.	Municipal
Job No.		

October 22, 1990

Marcella Sherfy
State Historic Preservation Officer
Montana Historical Society
225 North Roberts
Helena, MT 59620

Subject: F 60-2(25)93
10th Avenue South - Warden Bridge

In response to Kathy's letter of November 11, 1989, I disagree with her contention that the Blossom House (24CA303) is eligible for the National Register under Criterion C. Although it is a good example of a Craftsman-style residence, commercial development in the area since the late 1950s has destroyed the visual integrity of the site and its association with a working class neighborhood. Enclosed is the 1957 Sanborn map of the area surrounding the Blossom House. As you can see, it was primarily a residential neighborhood, but commercial buildings were already beginning to encroach on it. The translite photograph shows the area as it appeared in 1988.

Constructed in 1929, the Blossom House was then located on the outskirts of Great Falls. Commercial development in the vicinity occurred near the Missouri River, approximately one mile west of the site. In 1949, there were no commercial buildings located between the 1700 and 1900 blocks of the street (the Blossom House is located at 1800 10th Avenue South). The character of the neighborhood began to change as a direct result of the completion of the O. S. Warden Bridge and the Montana Highway Department's widening of 10th Avenue South from two lanes to four lanes in the early 1950s. By 1957, there were nineteen residences and twelve commercial enterprises near the site. In 1961, there were seventeen residences and eleven businesses. By 1965, however, the mushrooming economy of Great Falls (caused by the construction of the Anti-Ballistic Missile system silos and the expansion of Malstrom Air Force Base) caused commercial development on 10th Avenue South to boom. In late 1965, only nine residences were still located on the 1700, 1800 and 1900 blocks of 10th Avenue South, compared to thirty businesses. By 1975, only the Blossom House remained to represent the early 20th century residential character. (The Bel-Air Apartments were constructed in 1956).

The Blossom House retains integrity of design, materials and workmanship, it no longer retains integrity of location, setting, feeling or association. Since the setting of the site has been so radically changed, the Blossom House can no longer be associated with the suburban origins of this area. Since there are no other dwellings located on 10th Avenue South in the vicinity of the site, the house does not suggest any feeling for the once residential character of the area. The commercial expansion in this area has compromised the Blossom House's association with the suburban development of 10th Avenue South and its association with blue collar families. Because of the intense development around the site, the trees, hedges and picket fence do not adequately separate it from the more modern commercial buildings surrounding it.

If you have any questions or concerns, please do not hesitate to contact either myself or Jon Axline.

Edrie L. Vinson, Supervisor
Environmental Section

Enclosures

ELV:JA:D:ENV:5.bh

cc: D.S. Johnson
C.S. Peil
R.R. Newhouse
E.W. Stettler
Environmental Section
File

CONCUR
MONTANA SHPO
DATE 11/13/90 SIGNED

303

MDT
Montana Department
of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Marc Racicot, Governor

MASTER FILE
COPY

RECEIVED

FEB 06 1996

[illegible]

JAN 19 1996

January 18, 1996

40
CA
03
16
03

CONCUR
MONTANA SHPO
DATE 5 Feb 96 SIGNED

Paul Putz
State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202

Subject: F 60-2(25)93
Tenth Avenue South - Great Falls
Control No. 1311

Enclosed is the site form and CRABS for the Consumers Service Station (24CA616) in Great Falls. Because of changes in the setting of the property, its bland architectural style and modifications to the site, we recommend it ineligible for the National Register. We request your concurrence.

If you have any questions, please contact me at 444-6258.

Jon Axline

Jon Axline, Historian
Environmental Services

Enclosures

cc: Gene Stettler, P.E., Great Falls District Administrator
Carl Peil, P.E., Preconstruction Bureau
Joel Marshik, P.E., Environmental Services
Gordon Stockstad, Resources Section
Stan Sternberg, Hazardous Waste Section

Montana Department
of
Fish, Wildlife & Parks

Helena, Montana 59620
March 27, 1989

Mr. Stephen C. Kologi, P. E.
Chief, Preconstruction Bureau
Department of Highways
2701 Prospect
Helena, MT 59620

Dear Mr. Kologi:

RE: F 60-2(25)93
Great Falls - 10th Avenue South
20th to Warden Bridge

We have reviewed your above-mentioned proposed project for expansion of a portion of 10th Avenue South to a six-lane facility from the Warden Bridge to 20th Street. The Department of Fish, Wildlife and Parks knows of no 6(f) or 4(f) Conversion of Use which would occur as a result of the proposed road expansion.

Thank you for the opportunity to comment. We appreciate your cooperation.

Sincerely,

Gretchen Olheiser

GRETCHEN OLHEISER, Chief
Operations Bureau
Parks Division

MEP/jw

Date Recd. Preconst. [illegible]

Act	Info	MAIL ROUTE	Attach	Initial
		30		
	✓	30 Eng. Specialties		
		31 Contract Plans		
	✓	32 Loc. Road Design		
	✓	33 Environment		
	✓	34 Hydraulic		
		35 Surfacing Design		
		36 Traffic		
		37 Pub. Hearing		
		38 Photogrammetry		
	✓	39 Consultant Design		
	✓	[illegible]		
	✓	[illegible]		
	✓	File		

DEPARTMENT OF COMMERCE
CENSUS AND ECONOMIC INFORMATION CENTER
LEAD AGENCY, MONTANA STATE DATA CENTER
& BUSINESS INDUSTRY DATA CENTER

MARC RACICOT, GOVERNOR
1424 9TH AVENUE

STATE OF MONTANA

(406) 444-2896
FAX: (406) 444-1518
PO BOX 200501
HELENA, MONTANA 59620-0501

MEMORANDUM

Date: October 2, 1995

From: Patricia Roberts

To: Population Data Users

Subject: 1992 and 1994 Revised Population Estimates for Counties
1992 Revised Population Estimates for Incorporated Places
1994 Population Estimates for Incorporated Places (NEW)

Enclosed are population estimates for Montana, all counties and all incorporated places released today by the U.S. Bureau of the Census.

National intercensal population estimates are prepared by the Federal State Cooperative for Population Estimates (FSCPE). The FSCPE contact for Montana is the Bureau of Business and Economic Research, University of Montana, Missoula, 243-5113.

If you need access to population estimates for other states or estimates for 1991 and 1993, please contact us at the Census and Economic Information Center, MT Dept. of Commerce.

RECEIVED
OCT 5 1995
GREAT FALLS CITY-COUNTY
PLANNING BOARD OFFICE

l:\ceicwp\popest94.mmo

"AN EQUAL OPPORTUNITY EMPLOYER"

MONTANA
1994 ESTIMATES OF THE POPULATION

(For Counties* and Incorporated Places**)

AREA NAME	7/1/94 EST.	7/1/92 EST.	4/1/90 CENSUS	% CHANGE 90 to 94
MONTANA	856,057	823,096	799,065	7.1%
BEAVERHEAD COUNTY	8,849	8,621	8,424	5.0%
DILLON	4,253	4,127	4,001	6.3%
LIMA	260	246	265	-1.9%
BIG HORN COUNTY	12,060	11,618	11,337	6.4%
HARDIN	2,985	2,997	2,940	1.5%
LODGE GRASS	504	493	517	-2.5%
BLAINE COUNTY	7,054	6,816	6,728	4.8%
CHINOOK	1,551	1,542	1,512	2.6%
HARLEM	885	865	882	0.3%
BROADWATER COUNTY	3,677	3,538	3,318	10.8%
TOWNSEND	1,932	1,785	1,635	18.2%
CARBON COUNTY	8,947	8,316	8,080	10.7%
BEARCREEK	41	38	37	10.8%
BRIDGER	764	736	692	10.4%
FROMBERG	414	376	370	11.9%
JOLIET	637	533	522	22.0%
RED LODGE	2,280	2,072	1,958	16.4%
CARTER COUNTY	1,531	1,499	1,503	1.9%
EKALAKA	457	420	439	4.1%
CASCADE COUNTY	81,167	79,247	77,691	4.5%
BELT	571	569	571	0.0%
CASCADE	871	778	729	19.5%
GREAT FALLS	58,202	56,696	55,125	5.6%
NEIHART	48	45	53	-9.4%
CHOUTEAU COUNTY	5,451	5,476	5,452	-0.0%
BIG SANDY	723	746	740	-2.3%
FORT BENTON	1,674	1,688	1,660	0.8%
GERALDINE	308	303	299	3.0%
CUSTER COUNTY	12,126	11,815	11,697	3.7%
ISMAY	20	20	19	5.3%
MILES CITY	8,745	8,542	8,461	3.4%
DANIELS COUNTY	2,152	2,144	2,266	-5.0%
FLAXVILLE	83	83	88	-5.7%
SCOBEY	1,131	1,120	1,154	-2.0%
DAWSON COUNTY	8,994	9,053	9,505	-5.4%
GLENDIVE	4,682	4,621	4,802	-2.5%
RICHEY	202	221	259	-22.0%
DEER LODGE COUNTY	10,229	10,108	10,356	-1.2%
ANACONDA-DEER LODGE	10,229	10,108	10,356	-1.2%
FALLON COUNTY	3,061	2,993	3,103	-1.4%
BAKER	1,830	1,782	1,818	0.7%
PLEVNA	126	130	140	-10.0%
FERGUS COUNTY	12,588	12,448	12,083	4.2%
DENTON	334	354	350	-4.6%
GRASS RANGE	153	168	159	-3.8%
LEWISTOWN	6,368	6,331	6,097	4.4%
MOORE	172	190	211	-18.5%
WINIFRED	162	163	150	8.0%
FLATHEAD COUNTY	67,285	62,851	59,218	13.6%
COLUMBIA FALLS	3,151	3,012	2,921	7.9%
KALISPELL	13,214	12,460	11,917	10.9%
WHITEFISH	4,862	4,570	4,368	11.3%
GALLATIN COUNTY	57,773	53,998	50,463	14.5%
BELGRADE	4,134	3,631	3,422	20.8%
BOZEMAN	25,067	23,953	22,660	10.6%
MANHATTAN	1,137	1,079	1,034	10.0%
THREE FORKS	1,357	1,252	1,203	12.8%
WEST YELLOWSTONE	999	926	913	9.4%
GARFIELD COUNTY	1,433	1,437	1,589	-9.8%
JORDAN	444	429	494	-10.1%
GLACIER COUNTY	12,426	12,187	12,121	2.5%
BROWNING	1,186	1,170	1,170	1.4%
CUT BANK	3,183	3,263	3,329	-4.4%
GOLDEN VALLEY COUNTY	949	907	912	4.1%
LAVINA	160	146	151	6.0%
RYEGATE	270	260	260	3.8%
GRANITE COUNTY	2,655	2,531	2,548	4.2%
DRUMMOND	282	267	264	6.8%
PHILIPSBURG	986	915	925	6.6%
HILL COUNTY	17,480	17,777	17,654	-1.0%
HAVRE	10,059	10,285	10,201	-1.4%
HINGHAM	180	186	181	-0.6%
JEFFERSON COUNTY	8,988	8,280	7,939	13.2%
BOULDER	1,427	1,324	1,316	8.4%
WHITEHALL	1,184	1,095	1,067	11.0%
JUDITH BASIN COUNTY	2,246	2,264	2,282	-1.6%
HOBSON	224	226	226	-0.9%
STANFORD	524	563	529	-0.9%
LAKE COUNTY	23,653	22,076	21,041	12.4%
POLSON	4,029	3,675	3,291	22.4%
RONAN	1,737	1,625	1,547	12.3%
ST. IGNATIUS	904	864	778	16.2%
LEWIS & CLARK COUNTY	51,524	49,576	47,495	8.5%
EAST HELENA	1,651	1,595	1,538	7.3%
HELENA	26,339	25,720	24,609	7.0%
LIBERTY COUNTY	2,238	2,256	2,295	-2.5%
CHESTER	915	927	942	-2.9%
LINCOLN COUNTY	18,409	17,628	17,481	5.3%
EUREKA	1,192	1,060	1,043	14.3%
LIBBY	2,626	2,513	2,532	3.7%
REXFORD	159	126	132	20.5%
TROY	974	1,008	953	2.2%
MCCONE COUNTY	2,140	2,104	2,276	-6.0%
CIRCLE	718	728	805	-10.8%
MADISON COUNTY	6,384	6,069	5,989	6.6%
ENNIS	840	808	773	8.7%
SHERIDAN	709	659	652	8.7%
TWIN BRIDGES	417	407	374	11.5%
VIRGINIA CITY	127	104	142	-10.6%

cont'd

U.S. Department
of Transportation
**Federal Highway
Administration**

Montana Division
301 South Park Street, Room 448
Drawer 10056
Helena, Montana 59626-0056

January 15, 1997

CEIVED
FEB 03 1997
NVIRONMENTAL

Ross Tervo, Supervisor, Urban Transportation Planning
Montana Department of Transportation
2701 Prospect Ave., PO Box 201001
Helena, Montana 59620-1001

RE: Conformity Determination for the Great Falls Transportation Improvement Plan (TIP) Update

Dear Mr. Tervo:

In accordance with the Clean Air Act Amendments of 1990, a conformity finding of the transportation plans, programs, and projects in a non-attainment area is required of the U.S. Department of Transportation. Based upon our evaluation of the Metropolitan Planning Organization's (MPO) finding of conformity and related documentation, in coordination with the Environmental Protection Agency (EPA), the MPO, and the MDT, we have determined that the Great Falls, Montana urbanized area has met the requirements of the Transportation Conformity guidance issued November 24, 1993. A finding of conformity is hereby made with respect to the subject Transportation Improvement Plan (TIP) Update.

This conformity determination is in effect until such time as a new determination is required either by new regulation, major revision of transportation plans, or a State Implementation Plan (SIP) revision.

Janice Wengert Brown

Louis F. Mraz, Jr.
FTA Regional Administrator

Janice W. Brown
FHWA Division Administrator

cc: FHWA - Robin Smith (HPD-08)

APPENDIX C

Biological Assessment

June 1992

Montana Department of Transportation
Biological Evaluation

Tenth Avenue South
Project F60-2(25)93
Control #1311

Introduction

Under Section 7 of the Endangered Species Act, as amended, activities conducted, sponsored, or funded by federal agencies must be reviewed for their effects on species federally listed or proposed for listing as threatened or endangered.

The Montana Department of Transportation (MDT) and the Federal Highways Administration (FHWA) are jointly proposing the Tenth Avenue South project in Great Falls, Cascade County, Montana.

Project and General Area Description

The 1.57-mile proposed project extends from the east end of Warden Bridge (milepost 94.63) to 20th Street (milepost 93.06) (Figure 1). The project will entail complete reconstruction along this segment to a 98-foot wide, six lane facility. Project improvements will include grading, drainage, surfacing, sidewalks, curb and gutter, signing, utility relocations, traffic signal upgrading, and access improvements. Construction is tentatively planned for 1993.

The project area is primarily urban, and is dominated by commercial development. With the exception of the areas between Warden Bridge and Second Street, and on the south side of 10th Avenue South between Second Street and Fourth Street, the entire project corridor is developed. The undeveloped areas are primarily comprised of ruderal vegetation and grassland communities.

At its closest point (the project terminus at Warden Bridge), the project is approximately 1200 feet from the Missouri River. No streams are crossed by the proposed alignment.

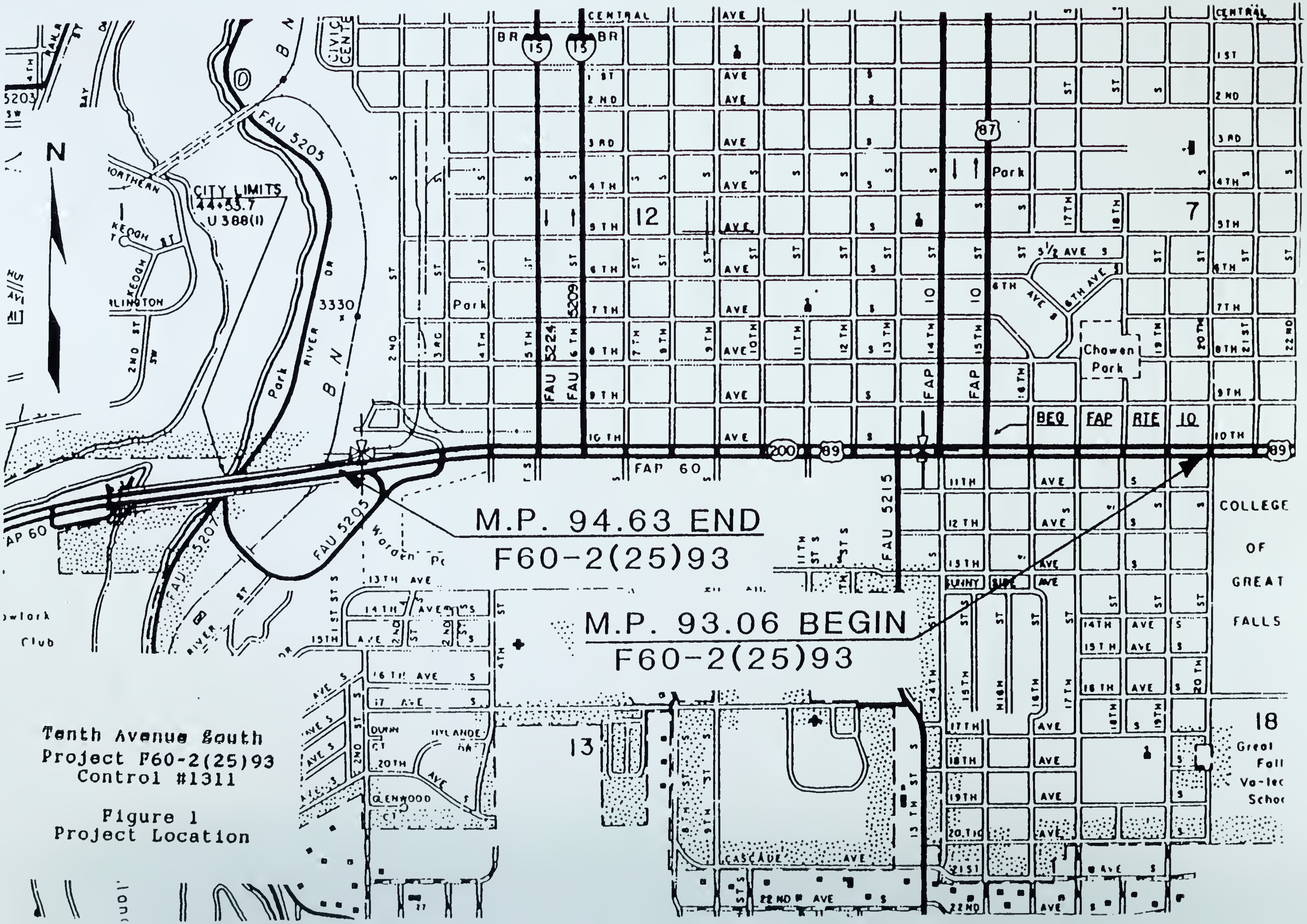
Study Methods

Lists of threatened and endangered species potentially occurring in the vicinities of several Great Falls area projects previously requested from the U.S. Fish and Wildlife Service (USFWS) were reviewed to ascertain which such species may occur in the Tenth Avenue South project area. Additionally, biologists familiar with threatened and endangered species use of the area were interviewed, and pertinent literature was reviewed.

A reconnaissance-level field survey of the project area was conducted on June 4, 1992. During the survey, the proposed alignment was examined by foot and by car for habitat potentially suitable for threatened and endangered species.

Study Results

Previous correspondence with the USFWS indicated that three endangered



Tenth Avenue South
Project F60-2(25)93
Control #1311

Figure 1
Project Location

species may occur in the Great Falls project areas: the bald eagle, the peregrine falcon, and the black-footed ferret. Additionally, the proposed project may occur in the general range of the threatened piping plover and the endangered interior least tern.

Bald Eagle

Analysis. No bald eagle nest territories are known to occur within several miles of the proposed project. The territories closest to the project occur along the Missouri River near Cascade, several miles southwest of the project, and Carter, several miles to the northeast (Flath pers. comm.). The immediate project area is primarily developed, and contains no suitable nesting habitat. No eagles were seen during the field survey.

Eagles may occur along the Missouri River in the project area as migrants or while wintering. Potential perching or roosting habitat in the project vicinity is severely limited, however, due to development. The project is oriented perpendicular to the Missouri River, and is approximately 1200 feet from the river at its closest point (milepost 94.63, the project terminus). Consequently, no disturbance to bald eagle migrating or wintering activities are anticipated from construction of the project. Similarly, no potential bald eagle nest, perch, or roost trees will be removed or encroached upon during construction.

Mitigation/Coordination Measures. The following measures are required to ensure that impacts to bald eagles are minimized:

- Required: The status and location of eagle nests in the general project area shall again be assessed by an MDT biologist during the 1993 nesting season (prior to the commencement of proposed construction) to ensure that no new eagle nests occur in the project area.

- Required: All relocated overhead electrical facilities shall be raptor-proofed in accordance with MDT Procedure Memorandum #208 - Raptor Proofing.

Determination of Effects. Based upon the above information and mitigation/coordination measures, it is the determination of this report that the proposed action will have no effect on the bald eagle.

Peregrine Falcon

Analysis. Peregrine falcons may occur in the general project area as spring and fall migrants, although such occurrences are extremely rare (Constance pers. comm.). No nest or reintroduction sites are known or proposed in the general vicinity (Flath pers. comm.).

Migrants would most likely occur along the Missouri River, which is 1,200 feet from the project terminus. Consequently, no disturbance to migrating falcons is anticipated from the project.

Mitigation/Coordination Measures. The following measure is required to ensure that impacts to peregrine falcons are minimized:

- Required: All relocated overhead electrical facilities shall be raptor-proofed in accordance with MDT Procedure Memorandum #208 - Raptor Proofing.

Determination of Effects. Based upon the above information and mitigation/coordination measure, it is the determination of this report that the proposed action will have no effect on the peregrine falcon.

Piping Plover and Interior Least Tern

Analysis. Neither of these water-associated birds are known to nest in the Great falls area (Constance pers. comm.), and no potential nesting habitat occurs in the project area.

These species may occasionally occur along the Missouri River as migrants; however, construction activities would not disturb migratory activities, as the project terminus is located 1,200 feet from the river.

Mitigation/Coordination Measures. No mitigation/coordination measures are proposed for the piping plover or interior least tern.

Determination of Effects. Based upon the above information, it is the determination of this report that the proposed action will have no effect on the piping plover or interior least tern.

Black-Footed Ferret

Analysis. This endangered species occurs in association with prairie dog towns. No prairie dog towns are known to occur in the Great Falls area (Constance pers. comm.) and none were observed during the survey. Thus, the black-footed ferret is not suspected to occur in the project area.

Mitigation/Coordination Measures. No mitigation/coordination measures are proposed for the black-footed ferret.

Determination of Effects. Based upon the above information, it is the determination of this report that the proposed action will have no effect on the black-footed ferret.

Conclusions

It is the determination of this report that the proposed action will have no effect on the bald eagle, peregrine falcon, interior least tern, piping plover, or black-footed ferret. The specified mitigation measures have influenced the conclusions drawn from this assessment, and are subject to subsequent review by the Endangered Species Office of the USFWS to determine compliance with the Endangered Species Act. Consequently, any substantive deviation from the proposed measures contained in this assessment will require approval from that office and MDT.

Prepared by:
Jeff Berglund
MDT Fish and Wildlife Biologist
June 5, 1992

Personal Communications

Constance, T. Assistant Regional Wildlife Manager. Montana Department of Fish, Wildlife, & Parks, Great Falls, Montana. June 5, 1992 telephone conversation.

Flath, D. Nongame Biologist. Montana Department of Fish, Wildlife, & Parks, Bozeman, Montana. June 3, 1992 meeting.

Personal Communication Form

Project Name: ~~Great~~ Tenth Ave. South

Date: 6/3/92

Project Number:

Control Number:

Name: Dennis Flath

Title: Nongame Biologist

Agency/Affiliation: FWP - Bozeman

Tel.# 994-6354

[✓ Meeting]/Telephone I/She/He Called/Returned Call

No Bald eagle nests known in Great Falls area; closest are nr Cascade + Carter

JB

Personal Communication Form

Project Name: Tenth Ave South Date: 6/5/92
Project Number:
Control Number:

Name: Terry Constance Title: Assist. Reg. Wildlife Manager

Agency/Affiliation: FWP - Gt. Falls Tel.# 454-3441

Meeting/[✓ Telephone] [✓ I]/She/He [✓ Called]/Returned Call

No BE nesting
General increase in bald eagle wintering in area;
last winter (mild winter) many eagles stayed
along Missouri - were ~13000 Canada Geese
btwn Gt Falls + Craig - attracted eagles
- Confluence of Sun + Missouri not [ ] area for wintering
- Anticipates no effects to bald eagles
- No peregrines, migrants may occur, but extremely
rare - no impacts

Not aware of any Int. Least tern or p. plover activity
(Graham Taylor in Gt Falls office (FWP) expert)

No BFF's (no prairie dog towns)

eagles - too
shallow; freezes.

JB

APPENDIX D

Noise Assessments

MASTER
FILE
COPY

Montana Department of Transportation
Helena, Montana 59620-1001

Memorandum

To: Karl M. Helvik, P.E., Supervisor
Environmental Engineering Section

From: Cora G. Helm
Hazardous Waste Section

Date: August 9, 1995

Subject: NOISE ASSESSMENT REPORT
F 60-2(25)93
10th Avenue South, Great Falls
CN 1311

A traffic noise assessment was conducted for this project in May 1990, using traffic volumes from 1988, and a design year of 2012. This report updates the present and design year traffic volumes to 1994 and 2018, respectively.

In the 1990 report, noise levels were determined at 5 different receivers, at distances ranging from 20 to 67 meters from centerline (65 to 220 feet), for traffic traveling at 35 mph. For the updated report, noise levels were calculated at similar distances using new traffic volumes and a speed of 56 kph (35 mph).

Leq(h) dBA Noise Levels

Distance from Centerline	Present Year 1994	Design Year 2018
20 m (66 ft)	70	71
45 m (148 ft)	67	68
70 m (230 ft)	65	66

Percent Trucks is 3.4.

Noise levels for residential locations (Category B) exceed the Noise Abatement Criteria of 67 dBA at distances of less than 45 meters (148 feet). For the few residences that exist along the project corridor, noise impacts exist and will increase slightly by the Design Year. The conclusions and discussion in the original noise report are still valid (see attached).

cgh:env

E. L. Vinson

Montana Department of Highways
Helena, Montana 59620

Memorandum

To: Robert R. Newhouse, P.E.
Consultant Design Engineer
Consultant Design Section

From: Edrie L. Vinson, Supervisor EV
Environmental Section

Date: May 23, 1990

Subject: F 60-2(25)93
10th Avenue South - Great Falls
Noise Analysis

A noise analysis has been conducted for the subject project and includes the expected noise levels for the Present Year 1988 peak hour traffic and the projected noise levels for the Design Year 2012. Design Year noise levels were calculated using the Design Hourly Volume (DHV). The percentage of trucks used in the analysis equalled 2.9% of the total hourly volume for both the present peak hour and the design hour. Traffic speeds were based on existing posted speed limits. Noise levels projected for the design year were calculated using the FHWA Noise Prediction Model. Ambient measurements were taken at selected locations along the length of the project and were used to adjust the values generated by the computer model to account for the inherent limitations of the Model with regard to stop-and-go traffic. At only one site (#2001) were noise levels noticeably affected by accelerating and decelerating vehicles. The computer model produced values 4 dBA less than the values measured. At all other locations traffic was generally flowing more smoothly and predicted levels were within ±1-2 dBA of the measured values.

Ambient noise level measurements were taken at five locations listed below. These include two single family residences and an apartment complex fronting 10th Avenue South and two residences located one-half block north and south of 10th Avenue. There are three motels along the project length that are at approximately equal distance (or greater) from centerline as the sites chosen. Noise levels will generally be the same for similar distances at these locations due to the general uniformity of physical characteristics, traffic ~~volumes~~ mix, and vehicle speeds along the project. For this reason noise measurements were not taken at every potentially noise sensitive location. The five sites selected are representative of all other similar locations throughout the project based on proximity to the roadway and category of use (i.e., residence, church, school, motel, etc.).

Site Locations

Site #	Station	Distance from Centerline	Remarks
2001	86+50 Rt.	65'	Residence
2002	96+50 Lt.	220'	Residence 1/2 block So.
2003	131+40 Rt.	60'	Residence
2004	130+50 Rt.	220'	Residence 1/2 block No.
2005	133+25 Lt.	72'	Apartment Complex

Site #2005 is the Belair Homes Addition. This consists of numerous two-story apartment buildings. The lower floors of the three structures fronting the north side of 10th Avenue South are in a depressed area which provides some shielding from traffic noise. However, the second floor is not shielded and the projected noise levels given should be considered as those for receivers at second floor levels. Noise levels at the ground floor will be approximately 3 dBA less.

Leq(h) dBA Noise Levels

Site #	Present Year - 1988	Design Year - 2012	"No-Build" Year - 2012
2001	71	72	72
2002	63	64	64
2003	69	71	71
2004	63	64	64
2005	68	70	70

Alternate 6-Lane (Build)
Traffic noise levels for the proposed 6-lane will increase approximately 1-2 dBA by the Design Year 2012 over existing peak hour noise levels. At distances up to 120' from centerline, the Noise Abatement Criteria (NAC) Leq(h) = 67 dBA (Category B) will be equalled or exceeded during periods of traffic flow equal to the design hourly volumes.

Alternate "No-Build"
Traffic noise levels based on projected traffic volume increases by the year 2012 will be the same for the "no-build" alternative as for the proposed 6-lane. At distances up to 120' from centerline, the NAC Leq(h) = 67 dBA (Category B) will be equalled or exceeded during periods of traffic flow equal to the design hourly volumes. Noise levels can be expected to increase 1-2 dBA over the present peak levels by the year 2012.

FHPM 7-7-3 defines noise impacts as occurring when the future traffic noise levels substantially exceed the existing noise levels (an increase of 10 dBA or greater), or when the NAC is approached or exceeded. The

NAC for Category B which includes schools, residences, motels, churches, and public meeting facilities is Leq(h) = 67 dBA. In accordance with FHPM 7-7-3, if potential impacts are identified we are required to consider noise abatement measures and implement them where reasonable and feasible. The projected noise level increases over existing levels are less than substantial (projected levels will increase by 1-2 dBA). The NAC will be equalled or exceeded for Category B up to 120' from centerline. The vast majority of residences in the project vicinity are at least 220' from centerline and front on 9th and 11th Avenues South. Only the two identified single-family units and the Belair multi-family units are within 120' of centerline. These locations already exceed the NAC Category B noise levels during present peak hour. Increases in noise levels by 2-3 dBA are not detectable by the human ear, therefore the projected design year noise level increases of 1-2 dBA will not be noticeable. The existence of numerous approaches and side streets along 10th Avenue South make noise mitigation in the form of barriers extremely difficult if not totally ineffective due to the many access openings required. There do not appear to be any other mitigation measures available. The majority of structures along 10th Avenue South are commercial in nature. All of these are considered as NAC Category C, Leq(h) = 72 dBA. This level will not be exceeded at distances greater than 65' from centerline.

Traffic noise levels will increase slightly by the Design Year 2012. Although the NAC Category B levels will be exceeded with or without construction of this project, by providing an additional two lanes, traffic flow will be improved. This should result in somewhat less congestion and possibly less acceleration and deceleration of vehicles. Though likely not readily noticeable, the resultant noise levels should be somewhat less. In this sense, project construction would be beneficial.

ELV:GJS:mb:2/f

cc: D. S. Johnson
G. A. Jackson
E. L. Vinson
File